



Schaeferer matic 2

User Manual





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User manual

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1. *Introduction*

1.1 *Welcome*

Dear customer

With this new coffee machine, you have purchased a Swiss quality product especially designed for the catering trade.

Two separate brewing units allow for the simultaneous filling of up to four cups.

This manual will inform you in detail on programming, commissioning, use and cleaning of your new machine. It also contains important safety instructions to ensure safe use.



Important!

Prior to commissioning the machine, carefully read the chapter "Safety instructions". The manufacturer rejects any liability for damages that are caused by improper use of the machine.

Performance of the coffee machine depends to a great extent on proper use and careful maintenance of the machine. We therefore recommend that you read all instructions carefully before commissioning the machine and that you keep them handy for future reference.

We hope you enjoy using your new coffee machine!

1.2 Symbols and pictograms



Note:

This section provides you with important notes and information.



Important!

This note indicates possible damage to property as well as possible financial and statutory penalties (e.g. loss of rights to claim under guarantee, liability suits, etc.).



Danger!

This note indicates a risk of severe and/or fatal injury if specific procedural rules are violated.

Whenever you see this symbol in the operating manual, take all necessary safety precautions.



Electric shock!

Risk of severe and/or fatal injury due to electric shock!



Environmental protection!

This symbol indicates that you have to comply with environmental regulations and/or legislation.

PTO



Turn over, more information on this subject on the next page.
This symbol will appear on the bottom right-hand side of pages.

Italics

Text in italics requires your special attention.

Display messages

The displays shown in the manual always follow immediately after their respective description and relate to the actual display on the coffee machine.



Display example

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2 SAFETY INSTRUCTIONS

This chapter warns you about possible dangers when operating your new machine. The information contained herein on how to recognize hazardous situations enables a safe and proper operation.

2.1 General

The coffee machine will be handed over by a service technician authorized by the manufacturer. Prior to commissioning the machine, read the operating instructions carefully and ensure that you fully understand them.
Always comply with your local safety regulations and hygienic guidelines.
Be sure that only authorized and trained personnel work on the machine!
Always keep this manual in a handy place near the machine.

2.2 Safety symbols

The following symbols appear next to all safety instructions in this manual. Follow the instructions to the letter and proceed with particular care in the cases described.



Danger!

This note indicates a risk of severe and/or fatal injury if specific procedural rules are violated.

Whenever you see this symbol in the operating manual, take all necessary safety precautions.



Electric shock!

Risk of severe and/or fatal injury due to electric shock!



Important!

This note indicates possible damage to property as well as possible financial and statutory penalties (e.g. loss of rights to claim under guarantee, liability suits, etc.).



Note:

This section provides you with important notes and information.

2.3 Prevention of accidents

In the event of incorrect operation or misuse, one or more of the following might occur:

- Risk of severe and/or fatal injury of the operator, third persons or animals that are in close proximity to the machine,
- Risk of damage to machine and other property of the operator or of third parties,
- Inefficient performance of the machine.



Danger!

People who are not familiar with these operating instructions, as well as children or people under the influence of alcohol, drugs or medication may not operate the machine. On self-service units, danger zones such as the steam pipe and the hot water outlet must be labelled in such a manner that the warning is clearly visible to the customer.



Important!

The installation, programming, maintenance and repair of the coffee machine must be carried out only by authorized service technicians.



Important!

The machine must be connected to the power supply system and drinking water lines in compliance with the regulations of your local service providers.



Electric shock!

Work on electric systems may be carried out only by qualified engineers or technicians.

The machine must be connected to a fuse-protected circuit.

Appropriate EU directives on low voltage systems and/or the country's or local safety rules and regulations apply.

We recommend connection through a residual current operated circuit-breaker.

The connection must be grounded and protected against sparkover in compliance with regulations.

The voltage must comply with the information given on the machine's serial plate.



Important!

To prevent water damage caused by hose breakage, it is recommended to run the water line via a water stop valve (mains-side).



Electric shock!

Never insert the power plug into the socket when wet and do not touch the plug with wet hands.



Danger!

The beverages delivered by the coffee machine are hot! To protect yourself against scalding, keep hands and other body parts away from the outlet area during the preparation and delivery of beverages.



Danger!

Parts of the product outlets, the hot water pipe and the steam pipe become very hot during the machine's cleaning cycle and when coffee, milk, hot water or steam are delivered. Always touch all outlets only at the specially designed protective elements.





Important!

Pressing the [**Stand-by**] button will only switch off the machine, but not physically separate it from the mains.

If your machine is equipped with a refrigerator, do not disconnect the power supply, as this will switch off the cooling system.

When the coffee machine is not used for a prolonged period of time (e.g. business vacation), follow the procedures outlined in chapter ["Extended idle times."](#)



Important!

Do not operate the coffee machine if the water supply is shut off, as otherwise the boiler will not refill.



Important!

Never disconnect the water line while the machine is switched on or in stand-by mode.



Electric shock!

Never touch live parts!

Always switch off the main switch or disconnect the machine from the mains before carrying out any maintenance work.



Important!

Malfunctions may be repaired only by authorized and qualified personnel.



Important!

Only use original spare parts.



Electric shock!

Immediately report damaged cables and plugs to an authorised and qualified technician and have them repaired or replaced.

If the mains cable is damaged, it may be replaced only by a service technician authorized by the manufacturer.



Important!

Immediately report visible damages and leakages to an authorised and qualified technician and have them repaired or replaced.



Environmental protection!

When selecting cleaning agents, make sure that they are environmentally safe, bear no health risks, and comply with local disposal regulations.

Use cleaning agents recommended by the manufacturer.

2.4 Hygiene



Note:

Prior to commissioning, run the cleaning program (cf. chapter "Cleaning").



Important!

Always follow hygiene regulations according to **HACCP!**

For daily and weekly cleaning, proceed as described in chapter "Cleaning."

Never spray the machine with water or other liquids.

For cleaning, never immerse the machine in water or any other liquid.



Danger!

During cleaning and usage of cleaning tools or products, there is a risk of injury.

2.5 Designated use

Proper use of the machine and the included accessories and options are subject to the agreement on use, any other existing additional agreements and the general terms and conditions of the M. Schaerer AG. The operating manual is an integral part of the above agreement of use. Any usage other than within the limits specified herein shall be regarded as not in accordance with the designated use. The manufacturer shall not be liable for any resulting damage.

2.6 Liability

Guarantee and liability claims in the event of injury to people and damage to property cannot be entertained if they are due to one or more of the following causes:

- Any use other than the designated one
- Improper assembly, commissioning, operation and maintenance of the machine and its options.
- Non-compliance with specified maintenance intervals
- Operating the machine with defect safety devices or with safety devices that are either not in place or not functioning properly
- Non-compliance with safety instructions in this manual with special regard to storage, installation, commissioning, operation and maintenance of the machine,
- Operating the machine in other than perfect condition
- Repairs not carried out by a qualified technician
- Catastrophic damage due to the influence of foreign bodies, accidents, vandalism and force majeure
- Intrusion into the machine with objects and opening of the housing



Important!

The manufacturer's warranty exclusively covers machines that have been properly maintained at the intervals specified and where original spare parts are used that were directly supplied by the manufacturer or one of the manufacturer's authorized suppliers.

Maintenance of the machine has to be carried out either after 12 months or after 100,000 coffee products have been dispensed.

Maintenance of machines with two brewing units has to be carried out either after 12 months or after 100,000 coffee products have been dispensed using either one of the brewing units.

Safety-relevant parts, such as safety valves, safety thermostats, boiler, etc., must be replaced and **may not to be repaired under any circumstances**. These parts always have to be replaced.

- Safety valves every **12 months**
- Boilers (steam generators, instant heaters) every **36 months**

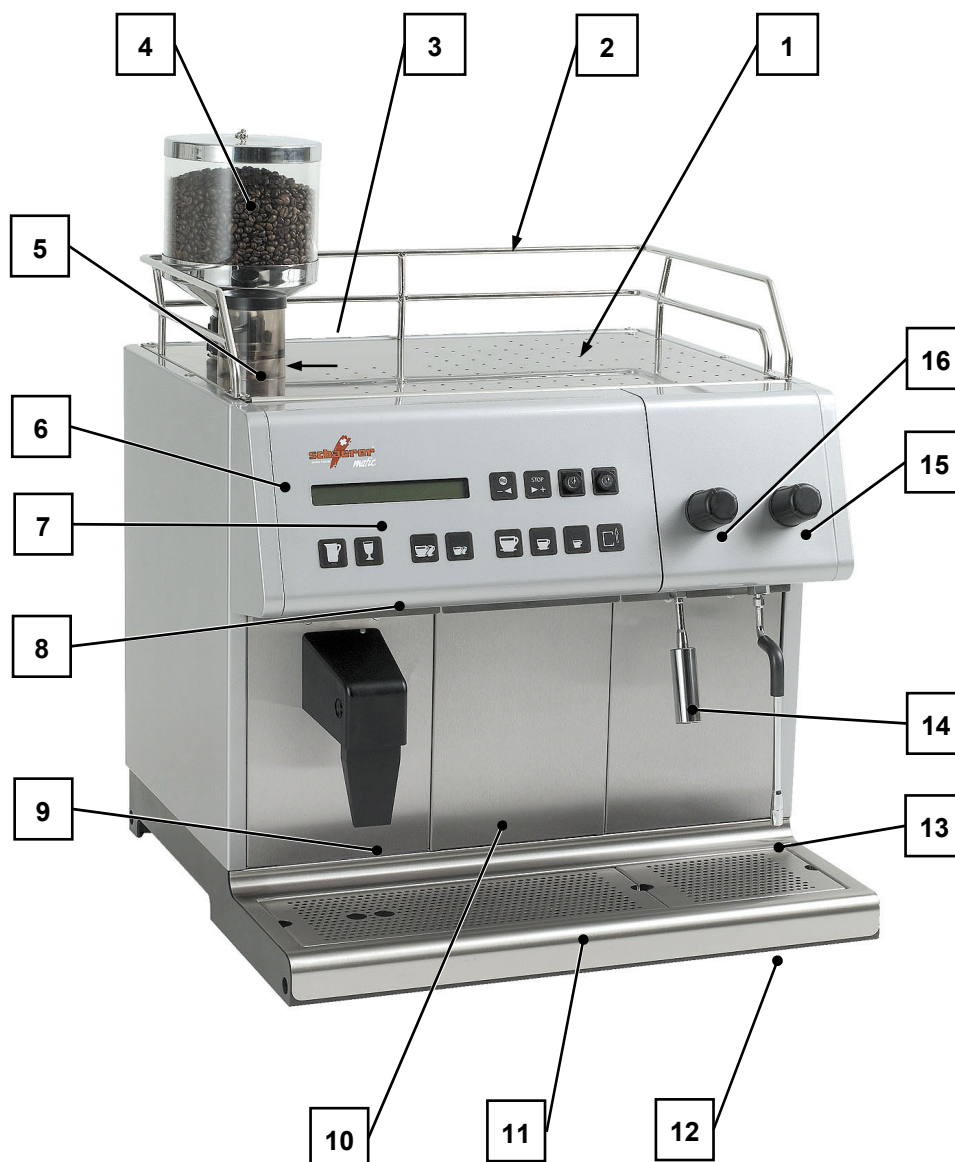
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3 DESCRIPTION

3.1 Coffee machine data

3.1.1 Full view (Model 19 SM-2)



Legend:

- | | |
|----|--|
| 1 | Heated cup plate |
| 2 | Cup plate frame |
| 3 | Sliding hatch to close the coffee bean container |
| 4 | Coffee bean container for coffee grinder no. 1 (standard coffee grinder) |
| 5 | Funnel for ground coffee ("decaf") |
| 6 | Control panel |
| 7 | Two-line illuminated display |
| 8 | Control surface |
| 9 | Coffee outlet, outlet height 80 mm to 160 mm |
| 10 | Coffee ground container cover |
| 11 | Drip grid |
| 12 | Drip tray with drain |
| 13 | Steam pipe |
| 14 | Hot water pipe |
| 15 | Steam tap Optional feature: [Steam] button |
| 16 | Hot water tap Optional feature: [Hot water] button |

3.1.2 Control surface

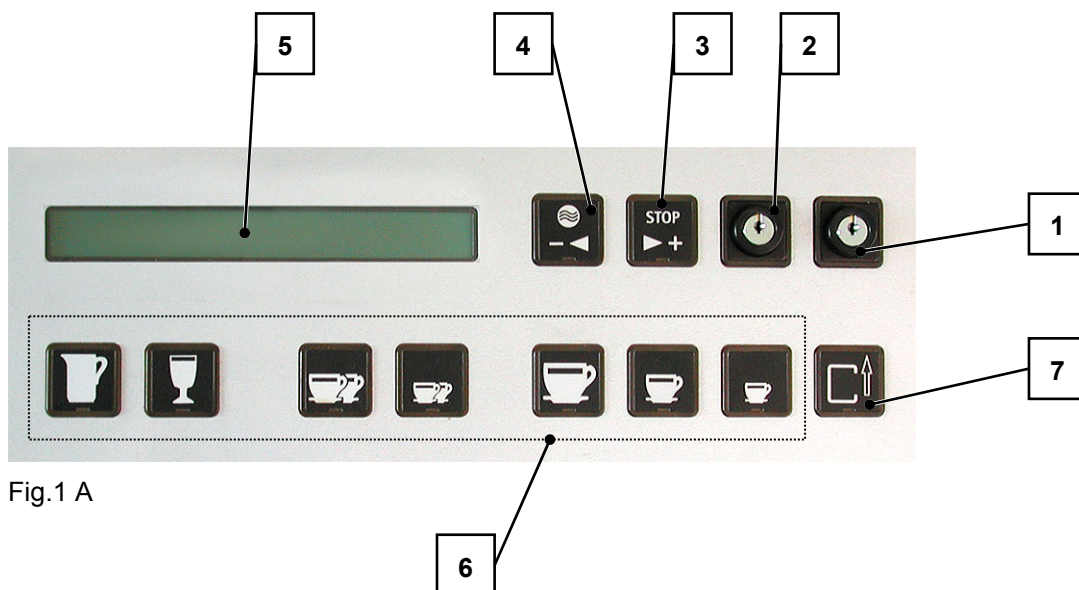





Fig.1 A

Legend:

- 6 Stand-by/on key-operated switch
- 7 Key-operated switch with 4 key positions for programming and operating the coffee machine:
 - for the person operating the machine
 - to retrieve product outputs and dosage settings
 - Disable or enable the product buttons
 - for payment mode (option)
- 8  button:
 - Interrupt beverage output in operation
 - Cancel previously selected products
 - Plus function in programming
- 9  button:
 - Activate cleaning process
 - Minus function in programming
- 10 Two-line illuminated LC display
- 11 Product keys:
 - programmable product buttons for serving of coffee
 - each product button features a green LED operating indicator and a customised product symbol
 - each product button can contain a second product
- 12  button:
 - Selection of one of the second products covered by a product button.
 - Entry and exiting a sub-menu
 - Confirming program entries



Note:

The product buttons shown in Fig. 3.1 A are examples only.

3.1.2.1 Stand-by/on key-operated switch

Key-operated switch in stand-by:

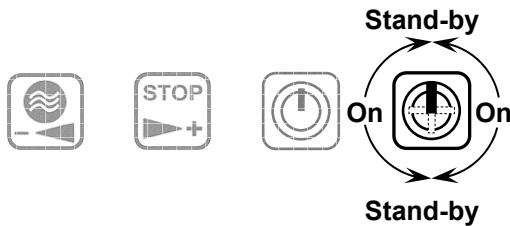


Fig.3.1 B The key is in stand-by position

The control board is switched off. The coffee machine is, however, still connected to the power supply. Control of the programmed operating temperature is active.

Key setting on

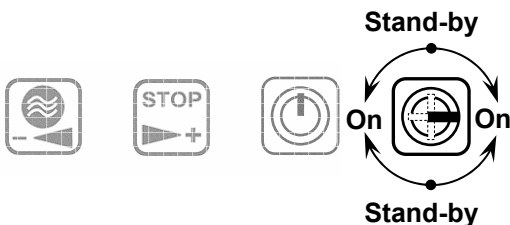


Fig. 3.1 C The key is in on position

Your coffee machine is ready for operation. When a product button is pressed, the selected beverage is dispensed.

3.1.2.2 Programmer key-operated switch

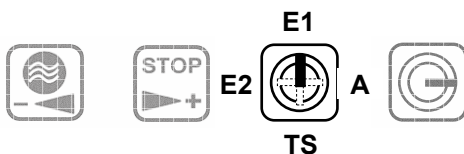


Fig.3.1 D The key is in position E1

4 Switch settings can be selected (cf. [Fig. 2.1 D](#)) :

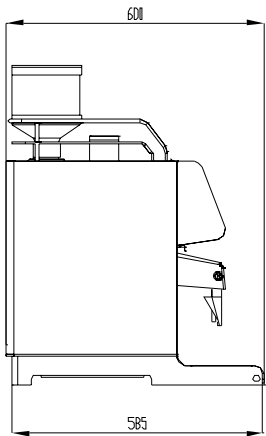
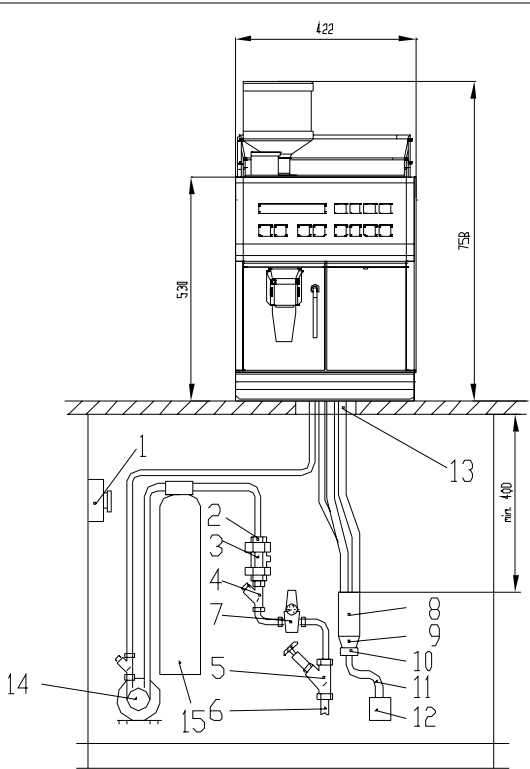
- Switch setting E1 for the user (normal operating mode)
- Switch setting E2 to retrieve outputs and dosage settings
- Switch setting TS to disable or enable product buttons
- Optional feature: Switch setting A for payment mode



Danger!

Other existing menus not listed by name are only intended for the service technician or a person authorised by the manufacturer! They are used to set the operating parameters and for function tests. Improper changes to the parameters can be a hazard to the operational safety of the coffee machine and in some circumstances require costly repairs to the coffee machine!

3.1.3 Installation plan for model 1 SM-2 Tea

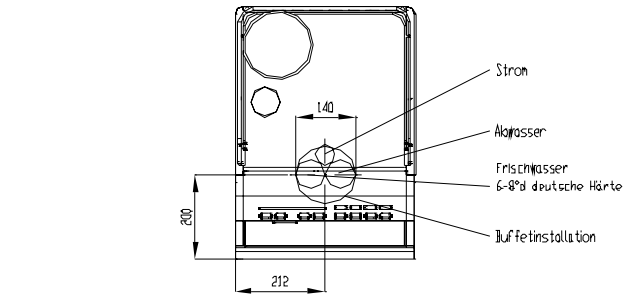


The following installations must be present:

- 1 Main switch type 26, 3 x 400 VAC (3PNE), 16 A
(all-pole isolated from the power supply by min. 3 mm gap)
 - 2 G 1/2" connection (female thread)
 - 3 Non-return valve SVGW inspected
 - 4 Filter
 - 5 G 1/2" stop valve
 - 6 G 1/2" water supply pipe
 - 7 Pressure reduction set to 3 bar
 - 8 Upright pipe, \varnothing 110 mm, length 200 mm
 - 9 Reduction, \varnothing 110/50 mm
 - 10 Nipple-type fitting, \varnothing 48 mm
 - 11 Siphon
 - 12 Outlet (plastic), \varnothing 56 mm
 - 13 Opening \varnothing 140 mm for supply and drain
 - 14 Pump with motor
 - 15 Brita jumbo type water filter
- Ideal water hardness:
12 °fH (French water hardness grade)
6 ... 8 °dH (German water hardness grade)

Otherwise we refer to local regulations.

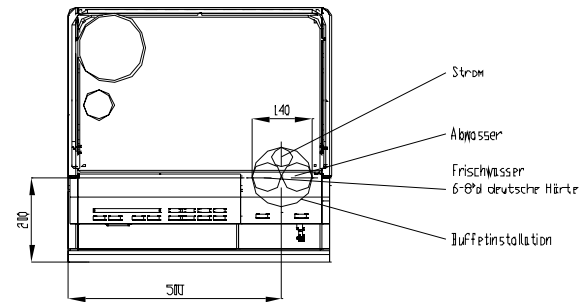
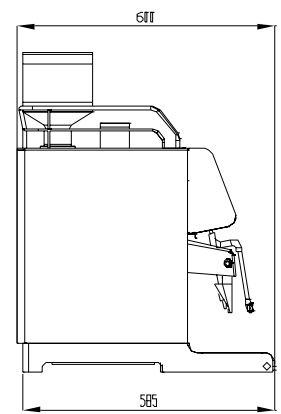
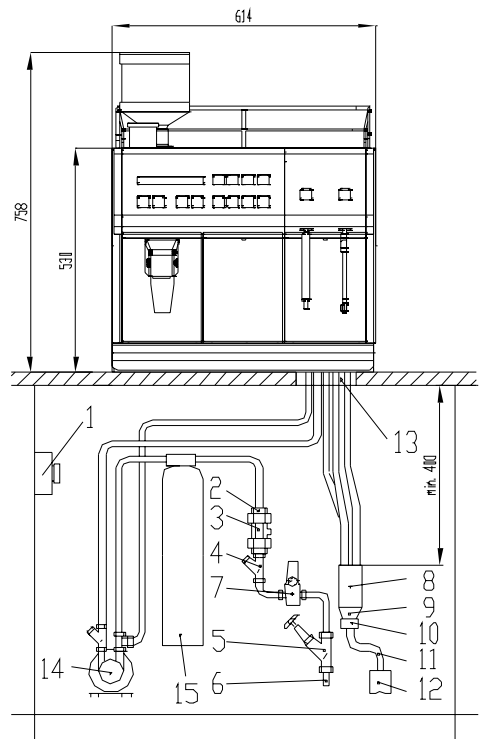
Subject to changes without notice!



Titel	Gegenstand	Dimension	Verbleib	Pos.	EDV Pos.	Bemerkung/Lp.Nr.
CO	alle nicht tot/Masse	SNEVER/GB	Änderungen	a)	b)	Ersatz durch
	Überflächen- bezeichnung	Progr.- Nr.	Verknüpft Vorricht.Nr.	c)	d)	Ersatz für
Bauseitige Installation						Sez. (ECCO) WTKer
1 SM II Tee						Kontr. -- --
schaefer CAD 3.8.6300						Freigeig -- --
						Heilekeit
						Geprüft -- --

Achtung: DAB Zeichnung! Änderungen nur auf CAD-Systeme vornehmen

3.1.4 Installation plan 19 SM-2, 15 SM-2, 18 SM-2



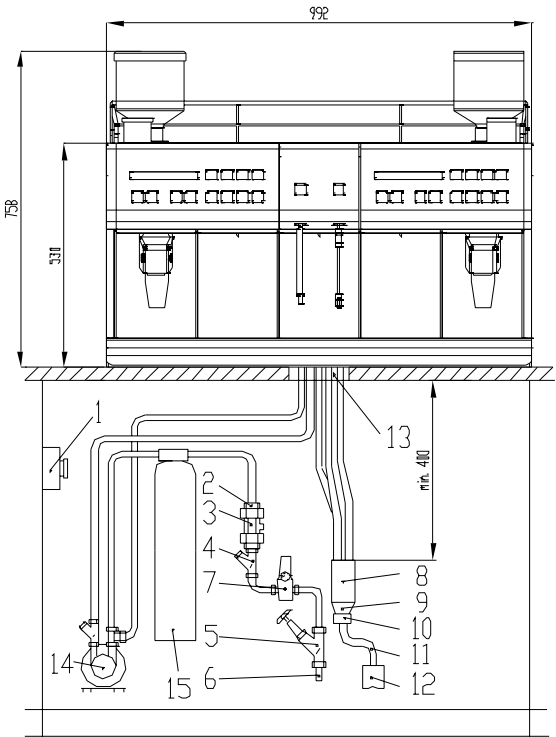
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 - 7 Pressure reduction set to 3 bar
 - 8 Upright pipe, Ø 110 mm, length 200 mm
 - 9 Reduction, Ø 110/50 mm
 - 10 Nipple-type fitting, Ø 48 mm
 - 11 Siphon
 - 12 Outlet (plastic), Ø 56 mm
 - 13 Opening Ø 140 mm for supply and drain
 - 14 Pump with motor
 - 15 Brita jumbo type water filter
- Ideal water hardness:
12 °fH (French water hardness grade)
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- Otherwise we refer to local regulations.

Subject to changes without notice!

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Achtung: CAD-Zeichnung Änderungen nur auf CAD-System vornehmen

3.1.5 Installation plan for model 191 SM-2, 151 SM-2, 181 SM-2



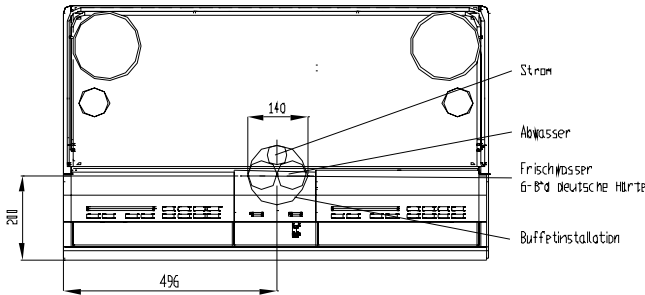
The following installations must be present:

- 1 Main switch type 26, 3 x 400 VAC (3PNE), 16 A (all-pole isolated from the power supply by min. 3 mm gap)
- 2 G 1/2" connection (female thread)
- 3 Non-return valve SVGW inspected
- 4 Filter
- 5 G 1/2" stop valve
- 6 G 1/2" water supply pipe
- 7 Pressure reduction set to 3 bar
- 8 Upright pipe, \varnothing 110 mm, length 200 mm
- 9 Reduction, \varnothing 110/50 mm
- 10 Nipple-type fitting, \varnothing 48 mm
- 11 Siphon
- 12 Outlet (plastic), \varnothing 56 mm
- 13 Opening \varnothing 140 mm for supply and drain
- 14 Pump with motor
- 15 Brita jumbo type water filter

Ideal water hardness:
12 °fH (French water hardness grade)
6 ... 8 °dH (German water hardness grade)

Otherwise we refer to local regulations.

Subject to changes without notice!



Stk.	Gegenstand	Dimension	Verkstoff	Pos.	EDV Pos.	Bemerkung/Lg.Nr.
1	alle nicht teilweise	SNR2788	Änderungen	a)	a)	ersetzt durch:
	Überflächen- behandlung	Pragr. Nr.	Werkzeug/ Vorricht.Nr.	a)	a)	ersetzt für:
Bauseitige Installation				Massstab		
151/181/191 SM II				Kontroll.		
schaeferCAD				Freigabe		
3.8.6312				Teilstat.		
				Geprüft		

Achtung: CAD-Zeichnung. Änderungen nur auf CAD-System vornehmen

3.1.6 Purpose of coffee machine

The following beverages can be prepared with basic model (without optional features):

- Coffee
- Espresso
- Decaffeinated coffee (Decaf)
- Hot water for tea, punch etc.
- Steam for foaming milk (not possible with model 1 SM-2)

Optional feature: Breakfast coffee (not possible with model 1 SM-2)

3.1.7 Serial plate

The serial plate contains the machine-specific data. This serial plate is on the back of the coffee ground container compartment.



Note:

- Fig. 3.1 E shows model 19 SM-2.
- The serial plate is in the same place with all models.
- For warranty purposes, and in case of failure, please copy the machine's serial plate data in the field below!



Fig. 3.1 E

1

Legend:

- 1 Coffee ground container cover

1. Move the cover of the coffee grounds container downward.
2. Remove the coffee grounds container.

Schaefer	
Instr.	4.6.7035
Type	19 SM II
Serial No.	#####
VOLTAGE	400V 3 N
FREQUENCY	50/60 Hz
CAPACITY	9700 W
FUSE	16 A

Inst. No.
Type:SM-2.....
Serial Nr.:
VOLTAGE: V
FREQUENCY: Hz
CAPACITY: W
FUSE: A

3.2 Operating information for the coffee machine

3.2.1 Performance Characteristics

The hourly capacity of ready-made beverages depends on the drink and drink container type and whether an optional brew acceleration feature is present, the so-called by-pass.

The following amounts can be assumed in actual usage:

Beverage capacity:	140 – 180 cups / hour
Beverage capacity with by-pass:	approx. 260 cups / hour
Hot water capacity:	approx. 45 litres / hour

3.2.2 Dimensions and weight



Note:

The mass and weights listed below only apply to the basic coffee machine model (without optional features)!

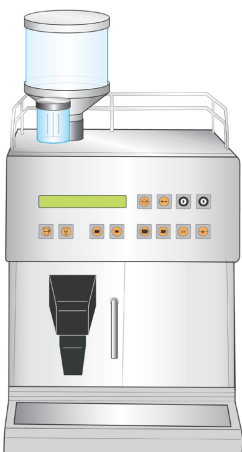
3.2.2.1 Coffee machine model 1 SM-2



Height	: 758 mm
Depth	: 600 mm
Net weight	: 78 kg
Coffee outlet height	: 80 mm – 165 mm (without rocker)

Subject to changes without notice!

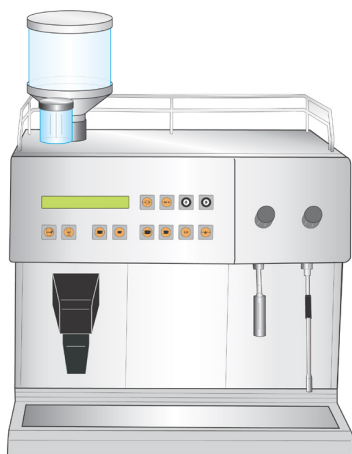
3.2.2.2 Coffee machine model 1 SM-2 Tea



Height	: 758 mm
Depth	: 600 mm
Net weight	: 78 kg
Outlet height	: 80 mm – 165 mm (without rocker)
Tea outlet height	: 85 mm – 170 mm

Subject to changes without notice!

3.2.2.3 Coffee machine model 19 SM-2



Height	: 758 mm
Depth	: 600 mm
Net weight	: 103 kg
Coffee outlet height	: 80 mm – 165 mm (without rocker)
Tea outlet height	: 85 mm – 170 mm

Subject to changes without notice!

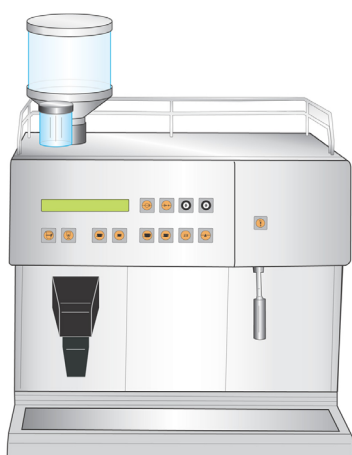
3.2.2.4 Coffee machine model 15 SM-2



Height	: 758 mm
Depth	: 600 mm
Coffee outlet height	: 80 mm – 165 mm (without rocker)
Tea outlet height	: 85 mm – 170 mm
Net weight	: 103 kg

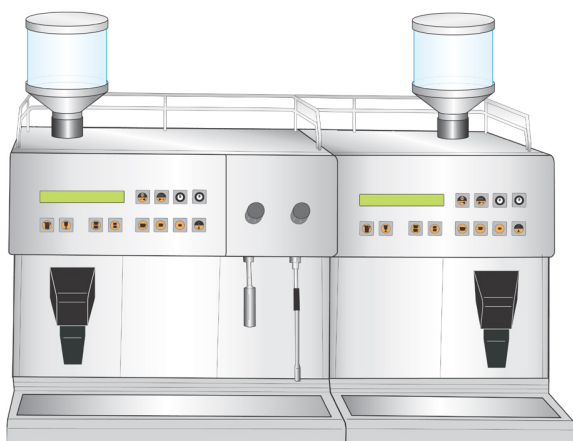
Subject to changes without notice!

3.2.2.5 Coffee machine model 18 SM-2, self-service mode

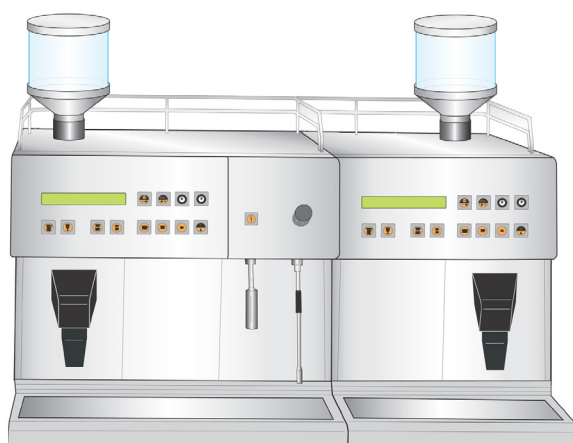


Height	: 758 mm
Depth	: 600 mm
Coffee outlet height	: 80 mm – 165 mm (without rocker)
Tea outlet height	: 85 mm – 170 mm
Net weight	: 103 kg

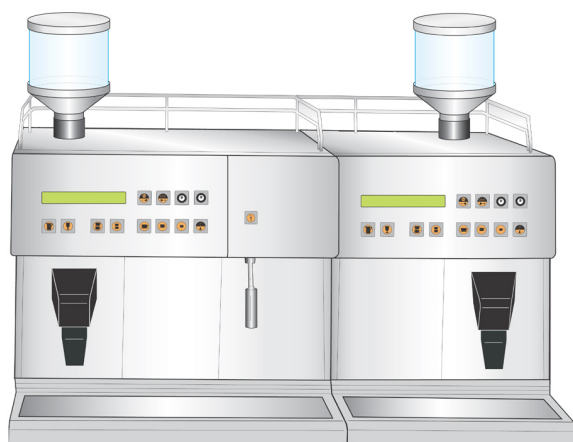
Subject to changes without notice!

3.2.2.6 Coffee machine model 191 SM-2

Height	: 758 mm
Depth	: 600 mm
Coffee outlet height	: 80 mm – 165 mm (without rocker)
Tea outlet height	: 85 mm – 170 mm
Net weight	: 175 kg

Subject to changes without notice!**3.2.2.7 Coffee machine model 151 SM-2**

Height	: 758 mm
Depth	: 600 mm
Coffee outlet height	: 80 mm – 165 mm (without rocker)
Tea outlet height	: 85 mm – 170 mm
Net weight	: 175 kg

Subject to changes without notice!**3.2.2.8 Coffee machine model 181 SM-2, self-service mode**

Height	: 758 mm
Depth	: 600 mm
Coffee outlet height	: 80 mm – 165 mm (without rocker)
Tea outlet height	: 85 mm – 170 mm
Net weight	: 175 kg

Subject to changes without notice!

3.2.3 Power supply

Model	Connected load
1 SM-2	3,7 kW / 10 A, 400 VAC (3 PNE), 50/60 Hz
1 SM-2 Tea	3,7 kW / 10 A, 400 VAC (3 PNE), 50/60 Hz
19 SM-2	9,7 kW / 16 A, 400 VAC (3 PNE), 50/60 Hz
15 SM-2	9,7 kW / 16 A, 400 VAC (3 PNE), 50/60 Hz
18 SM-2	9,7 kW / 16 A, 400 VAC (3 PNE), 50/60 Hz
191 SM-2	11,2 kW / 16 A, 400 VAC (3 PNE), 50/60 Hz
151 SM-2	11,2 kW / 16 A, 400 VAC (3 PNE), 50/60 Hz
181 SM-2	11,2 kW / 16 A, 400 VAC (3 PNE), 50/60 Hz

The voltage on the serial plate must correspond to the local mains voltage. For specific voltages, please contact the manufacturer or an authorised customer service representative.



Danger!

- **An authorized specialist must install or inspect the installation!**
- **The phase must be protected with in the models 1 SM-2 and 1 SM-2 Tea with 10 A and with 16 A for the models 15 SM-2, 18 SM-2, 19 SM-2, 151 SM-2, 181 SM-2 and 191 SM-2.**
- Never operate the coffee machine if the mains cable is defective. A defective mains cable or plug must immediately be replaced by a service technician authorized by the manufacturer.
- Use extension cords only when you are sure that they are in perfect condition. The extension cord for model 1 SM-2 must have a minimum cross section of 1.5 mm², for all other models it must have a minimum cross section of 2.5 mm² and be equipped with a 5 pole plug (3 PNE). The 5 pole plug must be suitable for 10 A per phase for model 1 SM-2 and for 16 A per phase for the other models.
- Power cable and/or extension cords must be placed so that they pose no safety or health hazard. Do not pinch the cords or pull them around sharp corners and over sharp edges; do not let them hang exposed in the room. Do not place the cords on hot surfaces and protect them from oil and harsh cleaning agents.
- Never lift or pull the coffee machine by its mains cable. Never pull the plug out of the socket by gripping the mains cable or extension cord. Never touch cord and plug with wet hands. Never insert a wet plug into the socket.

3.2.4 Water supply/drain

The coffee machine must be connected to a G 1/2" drinking water line with fittings as shown in the installation diagram on pages 3-5 to 3-7.

If the coffee machine is to be connected to a newly installed water line, the line and the pressure hose must be properly rinsed to ensure that no dirt particles are fed into the machine.

If the machine is to be connected to a water drain, the supplied drainage hose should be connected to the drip tray and the siphon and fastened securely. The hose should point downwards so that water can easily flow out of the drip tray.



Note:

Ideally, water hardness should be **6-8°dH** (standard German hardness) or **8-12°FH** (standard French hardness). Chlorine content should not exceed **100 mg per litre**. The ideal **pH value** is **7**. Local regulations apply.

Water pressure:

Minimum pressure: 1 bar

Maximum pressure: 3 bar



Note:

We recommend setting the decompression valve to 3 bar.

Feed water temperature:

Min. 10 °C

Max 30 °C

3.2.5 Volumes

Coffee machine Basic model	Boiler for Coffee water	Boiler for Steam and Hot water	Coffee bean container	Filler funnel Coffee powder
1 SM-2	2,3 l	—	1,0 kg	—
1 SM-2 Tea	2,3 l ²⁾	—	1,0 kg	—
19 SM-2	2,3 l	8,3 l	1,0 kg	1 ³⁾
15 SM-2	2,3 l	8,3 l	1,0 kg	1 ³⁾
18 SM-2, Self ¹⁾	2,3 l	8,3 l	1,0 kg	—
191 SM-2	2x 2,3 l	8,3 l	2x 1,0 kg	2 ³⁾
151 SM-2	2x 2,3 l	8,3 l	2x 1,0 kg	2 ³⁾
181 SM-2, Self ¹⁾	2x 2,3 l	8,3 l	2x 1,0 kg	—

¹⁾ Self-service mode

²⁾ Coffee water and hot water

³⁾ A maximum of 2 portions of coffee powder with a measuring spoon can be poured into the funnel.

Coffee grounds container:

100 to 130 coffee ground cakes (container capacity depends on the product)

3.3 **Equipment and accessories**

3.3.1 **Model variations**

The Schaerer-matic SM-2 model is available in the following basic models (without optional features):

Model	Selectable products
1 SM-2	Coffee
SM-2 Tea	Coffee, hot water
19 SM-2	Coffee, manual hot water and steam output
15 SM-2	Coffee, automatic hot water output, manual steam output
18 SM-2	Self-service mode Coffee, automatic hot water output
191 SM-2	2x Coffee, manual hot water and steam output
151 SM-2	2x Coffee, automatic hot water output, manual steam output
181 SM-2	Self-service mode 2x Coffee, automatic hot water output



Note:

The basic model of a coffee machine can be adapted to specific customer needs with optional additional equipment.

Just ask a manufacture-authorised customer service representative for assistance.

3.3.2 **Shipment (included)**

1 SM-2, 1 SM-2 Tea				
19 SM-2, 15 SM-2, 18 SM-2				
191 SM-2, 151 SM-2, 181 SM-2				
			Item	Order. no.
1	1	1	Complete coffee machine	*
1	1	1	User manual	*
1	1	1	Quick Reference Card	*
2	2	2	ON-/Stand-by-key	050431
2	2	2	Programming key	050432
1	1	1	Cleaning set consists of:	067911
		1	Brush	067409A
		1	Spoon for cleaning powder	067111
		1	O-Ring	064455
1	1	1	Bottle of cleaning powder	067447
2	3	3	Reinforced hose 1500 mm long	067766
1	1	1	Reduction snip (G ½ ")	068179
3	5	5	Flat packing	064249
1	2	2	Outlet hose 1000 mm long	067784
1	2	2	Deviating curve	067784
1	2	2	Tube clamp	067767
1	1	2	Grounds container	067331
1	1	1	Pump	complete

*** * Customised items**

Subject to changes without notice!

3.3.3 Accessories (not included in shipment)

Item		Order. no.
1	Safety data sheet for cleaning powder	020803

3.3.4 Options

**Note:**

You can read the details on the additional optional features listed in chapter 7 "Options" or obtain information from a manufacturer-authorised dealer.

- Payment systems in different models:
 - internal: Waiter jack
 - external: Tokens, coin slots, coffee bar systems etc.
- Coffee output accelerator:
 - Brew accelerator (also called by-pass)
 - Turbo program (coffee output accelerator)
- SES (Schaerer Espresso System for special espresso)
- Two, three or four grinders
- MiniMix (grinding mixture card available from 2 coffee grinders onwards)
- Coffee powder doser
- Coffee grounds ejection into ext. container (coffee ground container omitted)
- Fresh water and wastewater container for trolley version (mobile operation)
- Breakfast set (only coffee machine 15 SM-2 and 19 SM-2)
- Swan neck
- Temperature sensor on the steam outlet
- Cold milk solution unit
- Milk foamer
- Chocolate dispenser
- Cup warmer

3.4 *Special settings*



Note:

All settings described in this section can only be programmed by an authorised service technician.

3.4.1 *Time-specific settings*

3.4.1.1 *Service reminder*

After a certain period or a certain number of beverages, a reminder is displayed that it is time to have the machine serviced by a service technician.

3.4.2 *Cleaning settings*

3.4.3 *Cleaning reminder*

Upon request the coffee machine can be programmed with a cleaning reminder. After the programmed number (up to a max. of 2000 coffee cycles is possible) of coffee servings, “**cleaning machine**” appears in the display. Displaying this message does not cause a blockage of the coffee machine. Coffee products can still be dispensed.

3.4.4 *Miscellaneous*

3.4.4.1 *Product mix*

Pre-selection of different beverage types and quantities can be enabled by the service technician.

3.4.4.2 *Manual dosing*

Can be enabled or disabled by the service technician.

3.5 **Commissioning**

3.5.1 **Initial commissioning of the coffee machine**

The coffee machine must be installed and commissioned by a service technician authorised by the manufacturer.

3.5.2 **Set-up conditions**

3.5.2.1 **Location**



Danger!

- Prior to installing, ensure that the coffee machine will not be positioned on a hot surface or near an oven.
- The support surface for the unit must be stable and level and may not be deformed by the weight of the coffee machine.
- Do not place the coffee machine on a surface cleaned with a hose.
- Only place the appliance where it can be supervised by trained personnel.
- Protect the machine from frost. If the coffee machine has been exposed to temperatures below freezing point, contact an authorised customer service representative before you start the unit.
- Not suitable for outdoor use. Never expose the coffee machine to external conditions such as rain, snow, frost, etc.



Important!

The location must comply with the following climatic conditions:

- Ambient temperature from 10 °C to 35 °C
- Relative humidity max. 80 % rF
- The machine is designed exclusively for interior use.

3.5.2.2 **Installation of the coffee machine**

Installation of the coffee machine should be done under the following conditions:

- Install the supply lines as shown in the mains-side installation diagrams to within one meter of the place of installation.
- Conform to the technical data.
- Provide and maintain sufficient clearance for maintenance work and operation:
 - above for filling coffee beans
 - Keep approx. 35 cm clear on left side
 - A minimum of 15 cm between machine back and wall (air circulation)
- Comply with the respective local statutory regulations regarding catering premises.

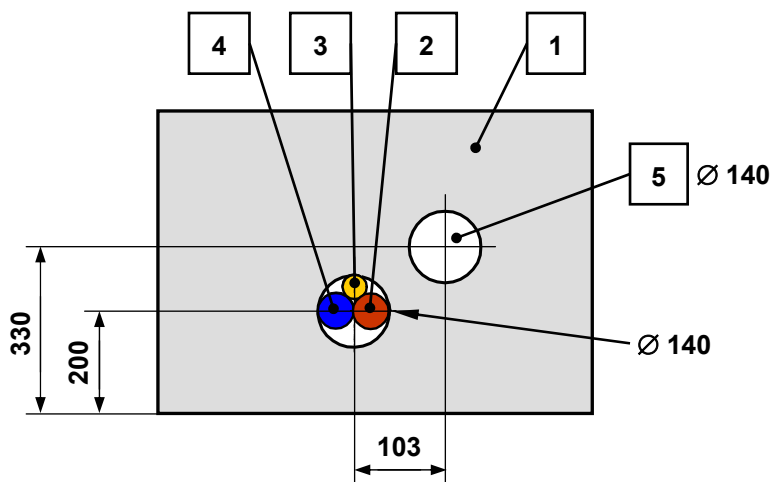


Note:

- The dimensions of the installed coffee machine are shown on pages [3-5](#) to [3-7](#).
- When installing the “coffee ground container disposal” option, please follow the drill plan specified for your coffee machine ["Counter lead-through"](#) on page [3-18](#).

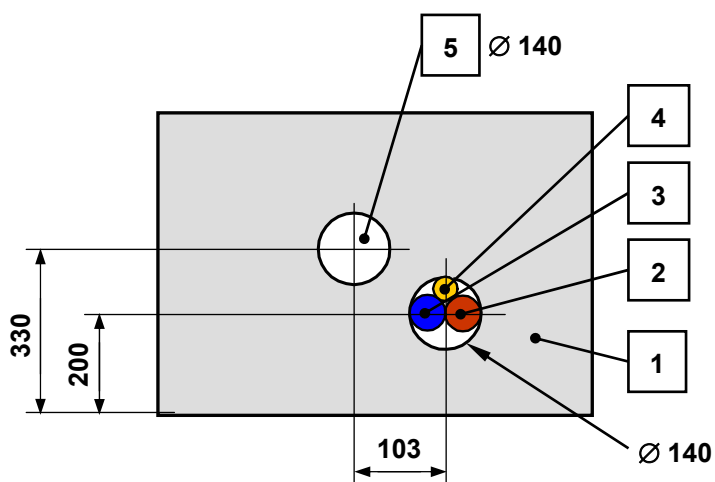
3.5.3 Counter lead-through

3.5.3.1 Counter lead-through for model 1 SM-2 Tea

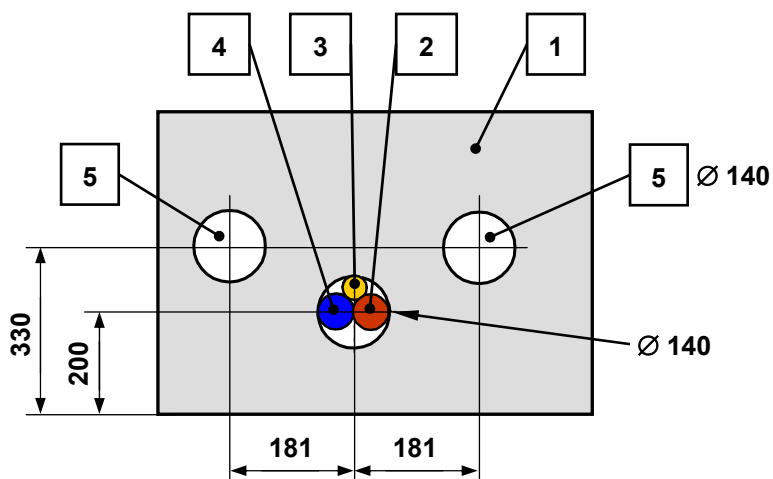
**Legend:**

- 1 Counter installation
- 2 Wastewater
- 3 Current
- 4 Fresh water
- 5 Optional feature: Additional bore holes for coffee ground disposal to another container

3.5.3.2 Counter lead-through for model 19/15/18 SM-2



3.5.3.3 Counter lead-through for model 191/151/181 SM-2



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4 OPERATION

4.1 Introduction

This chapter describes the basic functions of the coffee machine. Read them carefully to ensure easy and problem-free routine operation.



Note:

Proper installation and programming of the coffee machine by an authorised service technician are crucial for a smooth operation and good product quality.



Danger!

- During product release, never move cups or other objects positioned below the beverage outlet, the hot water outlet or the steam pipe! The beverages delivered by the machine are hot!
- After having pressed the selection button, keep hands and other body parts away from the outlets to prevent scalding!
- Never aim steam or hot water jets against persons!
- Do not touch the hot cup plate or the beverage outlets. Touch the hot water outlet and the steam pipe only at the insulated handles.
- The coffee machine does not stop when a cup is removed from underneath an outlet during serving. Delivery (including pre-selected delivery) can only be terminated by pressing the [STOP] button.
- Never touch the brewing unit with your bare hands!



Danger!

Switch off the coffee machine if you accidentally pour liquid over the cup plate (risk of short-circuit)!

Contact customer service representative immediately.



Environmental protection!

Noise emission levels can be up to 70 dB (A), particularly when heating up beverages.

4.2 Operating Modes

There are 3 operating modes, shown on the display as follows:

select product
12:00 01.03.2002

Your coffee machine is ready for operation. When a product button is pressed, the selected beverage is delivered.

credit operation
12:00 01.03.2002

The internal or external payment system is active. Products can be dispensed according to the installed system.

>> Standby SM-II <<
12:00 01.03.2002

The control board is switched off. The coffee machine is, however, still connected to the power supply. Control of the programmed operating temperature is the function.

Display examples

4.3 Messages displayed when coffee machine is ready for operation



Note:

These messages only appear when the coffee machine is idle, i.e. when no beverages are being served. Displaying these messages does not mean that the dispensing process will be interrupted.

Select product
** container full **

Empty the grounds container. Up to ten more cups of coffee can be made.

Select product
** Heating up **

The water temperature in a boiler has fallen to more than 10°C below the programmed value. Please wait until the machine has warmed up again before dispensing the next product.

...¹⁾
** Clean machine **

Start the cleaning program (cf. [5 "Cleaning"](#), page [5-1](#)).

¹⁾ Depending on the operating mode of your coffee machine, here you will either see "Select product" or "Credit operation".

4.4 Routine operation

**Note:**

For the functions described in this chapter, it is assumed that the coffee machine is ready for operation. The display must show the following text:



Display example

4.4.1 Refilling of coffee beans

The coffee bean container(s) may only be filled with max. 1 kg of coffee beans each.

**Note:**

Never fill the coffee bean containers with a different product than roasted coffee beans!

The coffee grinder is set for a specific coffee mixture. When changing the mixture, the grinder and the dosing apparatus must be readjusted by a manufacturer-authorized service technician.

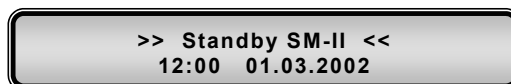
**Danger!**

- **Never reach with your hands into the coffee bean container(s) when the machine is switched on.**
- **When refilling the bean container(s), do not reach into the grinder and do not press a product button!**

4.4.2 Making the coffee machine ready for operation

4.4.2.1 Pre-checks

1. Prior to switching on the machine, check the following:
 - The fresh water supply is open
 - The coffee bean container(s) is (are) filled (cf. [4.4.1 "Refilling of coffee beans" on page 4-4](#)).
 - The coffee sliding hatch is open.
 - The coffee grounds container has been emptied.
 - The coffee machine is connected to the power supply.
 - The following text must be shown on the (dark) display:



Display example

4.4.2.2 Switch on the coffee machine

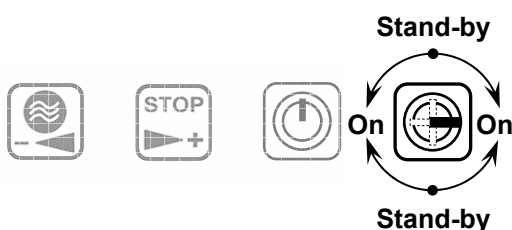


Fig. 4.4 A

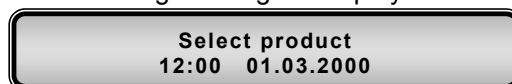
Der Schlüssel ist in der Position On.

1. Switch on the coffee machine, by turning the key of the stand-by/on key switch to On position (cf. Fig. 4.4 A.)

All of the buttons light up briefly.

The edges of the stand-by/on key switch blink green.

The following message is displayed:



Display example



Note:

- For coffee machines with fresh water tank cf. 7.4 "Operating instructions for special coffee machines" on page 7-3.
- Depending on how the coffee machine is programmed, another message may be displayed when the coffee machine is ready for operation, especially if payment mode is activated.

4.4.3 Pre-select/delete beverage types and product quantities

If enabled by a service technician, the beverage types and/or 96 products of the same type on the buttons (including level 2). The coffee machine will dispense the pre-selected beverages in the order indicated.

If the coffee machine is in active payment mode, the products can be dispensed according to the installed system.



Note:

- With [STOP] you can delete the pre-selected products.
- The total shown on the display of the pre-selected products (product selection) is only deleted when the last pre-selected product has been dispensed.

Display example:



The display shows:

Product selection13: 13 products were pre-selected.

Serving 2: 2 of the 13 pre-selected products have already been dispensed.


Cancel beverage pre-selection and product quantities:

After pressing [STOP] the set pre-selection is cancelled. Another product already prepared by the coffee machine (which can be recognized by the blinking product button) will be dispensed and cannot be cancelled.

4.4.4 *Serving coffee beverages*



Note:

- If your coffee machine has a payment system installed and enabled, please read the instructions available separately.
- With [] you can cancel the pre-selected coffee beverages if your coffee machine is not operated in payment mode (credit mode).
- Refilling of coffee beans [4.4.1 "Refilling of coffee beans", page 4-4](#).
- Select type of beverage: cf. [4.4.3 "Pre-select/delete beverage types and product quantities", page 4-5](#).



Danger!


The beverages delivered by the coffee machine are hot! To protect yourself against scalding, keep hands and other body parts away from the outlet area during the preparation and delivery of beverages.

1. Position one or two empty cup(s) underneath the coffee outlet.
2. Press the button for the desired product.

The following message is displayed:



The button pressed is illuminated with a green light.

3. * If you have entered the wrong number of products, press []. Continue with step 2 to enter the correct number of products.
4. Remove the cup(s) only after the product button is no longer illuminated.

4.4.5 Prepare products using the second product level

If a service technician has installed and enabled the second product level, the product buttons can be used to pre-select two different products.

In this operating mode you can program the most popular coffee and hot water products on level 1 and the less popular products on level 2 (second product level), such as ground decaffeinated coffee.



Danger!

The beverages delivered by the coffee machine are hot! To protect yourself against scalding, keep hands and other body parts away from the outlet area during the preparation and delivery of beverages.

Perform the following procedure:

1. Position one or two empty cup(s) under the right beverage outlet.

2. Press [] to go to level 2.



The button [] is illuminated with a green light.

3. Press the desired product button.
The button pressed is illuminated with a green light.
The following message is displayed:



4. * If you want to dispense one of the products on level 1, press the button [] again.
5. Remove the cup(s) only after the product button is no longer illuminated.

4.4.5.1 Dispense coffee with previously ground coffee powder

Basic model: **Coffee machine 1 SM-2, 1 SM-2 Tea**
Coffee machine 19 SM-2 and 15 SM-2
Coffee machine 191 SM-2 and 151 SM-2 Tea
 Not possible with models 18 SM-2 and 181 SM-2.



Note:

- The coffee machine can be enabled for manual coffee preparation by the service technician.
- You can add one or two portions of coffee powder with the measuring spoon to the filler funnel.
- Only use ground coffee.
- A dosing device is recommended when larger quantities are required.
- Product pre-selection is only possible with the "coffee dosing device" option (cf. ["Coffee dosing device," page 7-5](#)).






Important!

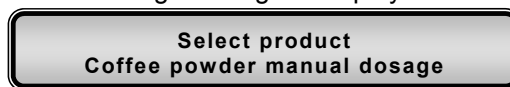
It is important to adhere to the following steps. Non compliance can result in the failure of your coffee machine.




Danger!

The beverages delivered by the coffee machine are hot! To protect yourself against scalding, keep hands and other body parts away from the delivery area during the preparation and delivery of beverages.


1. Place the empty cup(s) under the beverage outlet.
2. Press [].
3. Press the programmed button for this product.
The pressed button and the button [] are illuminated with a green light.
The button [] blinks.
The following message is displayed:




4. Put the coffee powder for one or two cups into the filter with a measuring spoon (cf. [Item 5](#), page 3-2).
5. Press [].
The following message is displayed:



Display example

The button [] is no longer illuminated.

6. Remove the cup(s) only after the product button and the button [] are no longer illuminated.

4.4.6 Dispense hot water



Note:

Not possible with model 1 SM-2.



Danger!

Risk of injury by scalding! Keep hands and other body parts away from the outlet!

4.4.6.1 Dispense hot water with the hot water tap

Basic model: **Coffee machine 19 SM-2 and 191 SM-2**



Note:

The display does not change during hot water output:




Display example

1. Position an empty cup under the hot water outlet (cf. Item 14, page 3-2).
2. Turn the hot water tap counter-clockwise until continuous hot water output occurs.
3. Turn the hot water tap in a clockwise direction in order to stop or cancel the hot water output.
4. Remove the cup.

4.4.6.2 Dispense hot water with the hot water button


Basic model: **Coffee machine SM-2 Tea**
Coffee machine 15 SM-2, 18 SM-2
Coffee machine 151 SM-2, 181 SM-2

Press the [] button to dispense hot water. The serving is **dosed** (automatic dosage stop) or **undosed** (start/stop mode) depending on the programming via the hot water pipe (cf. Item 14, page 2-2).



Note:

- In coffee machine 1 SM-2 Tea, the hot water quantity can only be dispensed as dosed.
- In coffee machine 1 SM-2 Tea, it is not possible to dispense hot water and coffee simultaneously.
- Hot water cannot be pre-selected.

1. Position an empty cup underneath the hot water outlet.
2. Press [].
The following message is displayed:





The button [] is illuminated with a green light.




Note:

The display does not change during hot water output.

3. * Stop or interrupt steam delivery (only possible with **undosed output**):
Press [].
The button [] is no longer illuminated if the output process has been stopped or cancelled.

If **dosed delivery** has been programmed in, the hot water delivery is automatically discontinued after the specified dosage time ends.

The button [] is no longer illuminated if the output process has been stopped.

4. Remove the cup.

4.4.7 Generating steam



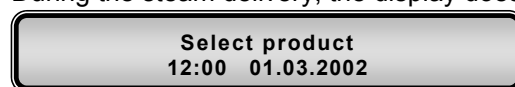
Danger!

Keep away from underneath the steam pipe while steam is delivered! Hold the cup in such a way that no liquid is spilled onto your hands or other body parts during heating!

4.4.7.1 Warming up a beverage with the steam tap

Basic model: **Coffee machine 19 SM-2 and 191 SM-2**
Coffee machine 15 SM-2 and 151 SM-2
 Not possible with models 1 SM-2 and 1 SM-2 Tea.

1. Point the steam pipe towards the drip grid. Open the steam tap to remove the condensation from the pipe system. Close the steam tap again when only steam escapes from the steam pipe.
2. Immerse the steam pipe into the container of the beverage to be heated until it reaches the bottom.
3. Open the steam tap.
Steam begins to be delivered.
During the steam delivery, the display does not change:



Display example



Danger!

The beverage may start to bubble when the boiling point is reached. Ensure that the steam pipe is always immersed in the liquid during steam delivery.

4. Heat the content to the desired temperature. To do this, move the container slowly up and down. Ensure that the steam pipe is always immersed in the liquid.
Tip: The deeper the sound, the higher the temperature of the heated liquid.
5. Finish the emission of steam by turning the steam tap in a clockwise direction.



6. Place the container on a stable surface.

Danger!

The steam pipe is hot. Touch the steam pipe only by using the rubber handle.

7. Clean the outside of the steam pipe with a wet and clean paper tissue.
8. Point the steam pipe towards the drip grid. Clean the opening of the steam pipe by briefly opening the steam tap.

4.4.7.2 Deliver steam with the steam button (optional feature)

Read about this under [7.9.2 "Deliver steam with the steam button"](#), on page 7-6.

4.4.8 End of operation/switching off the machine

If the coffee machine is not used for longer periods, e.g. nights, it can be switched to stand-by. In this mode, the boilers are kept at the programmed operating temperature and no beverages are available. Cup plate heating is in operation.

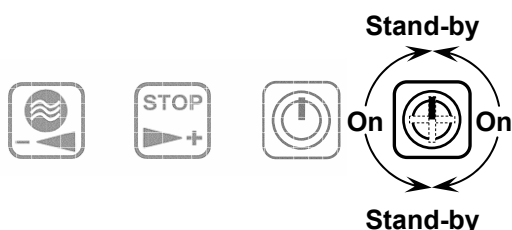
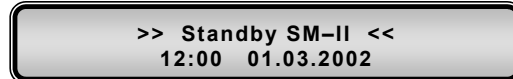


Fig. 4.4 B

The key is in Stand-by position.

1. Carry out the daily cleaning routine (see chapter 5.2 "Cleaning", page 5-3).
2. Turn the key on the stand-by/-on key switch to stand-by position (cf. [Fig. 4.4 B](#)).
The following message appears on the non-illuminated display:



Display example

4.5 Longer idle time

If the coffee machine is not used for several weeks or months (e.g. outside the season), it must be fully switched off.

4.5.1 Several weeks (e.g. business vacation):

1. Carry out the daily cleaning routine (cf. chapter [5.2 "Daily cleaning,"](#) page 5-1).
2. Turn the key on the stand-by/-on key switch to stand-by position (cf. [Fig. 4.4 B](#)).
3. Close the fresh water supply tap.
4. Pull the mains plug from the socket, respectively cut off the power supply with the master switch.

4.5.2 Standstill for several months (e.g. outside the season):

1. Perform steps 1. to 4. as in "Several weeks (e.g. business vacation):" on page 4-11.
Vacuum the coffee beans out of the coffee bean containers.
2. On premises where the temperature can drop below zero, the boilers must be emptied. To empty the boilers, ask a customer service representative authorised by the manufacturer for assistance.



Important!

If you resume operation at later point in time, ensure that you open the water supply first and only then switch on the power supply.

4.5.3 Dismantling the coffee machine

1. Contact a manufacturer-authorized customer service representative .

4.6 Programming by the manager (programming level 2)

For all the functions described in this chapter, it is assumed that the coffee machine is ready for routine operation in payment mode.

4.6.1 Menu view of programming level 2 (Standard)

In programming level 2 you can make the principal settings or modifications to be undertaken for routine operation.

The following menus and sub-menus are available under programming level 2:

- DISPLAY PRODUCT DELIVERIES:

- Display product total
- Display delivery quantity per product

- CHANGE DOSAGE

- CHANGE GRINDING QUANTITY:

- Change the grinding quantity for all products
- Change the grinding quantity per product
- Change the grinding mixture distribution (optional feature: two coffee grinders and more)

- CHANGE TIME/DATE

- CHANGE PAYMENT (optional feature):

- Switch between day/night price
- Display waiter payment
- Display sales total
- Print waiter total
- Display price total per product
- Disable/enable waiter jack
- Change product prices



Danger!

Other existing menus not listed by name are only intended for by the service technician or a person authorised by the manufacturer! They are used to set the operating parameters and for function tests. Improper changes to the parameters can be a hazard to the operational safety of the coffee machine and in some circumstances require costly repairs to the coffee machine!

4.6.2 Operating elements for programming level 2


The following buttons are used for programming:



The  button:


- Next higher menu on the programming level
- Move upward in the sub-menus
- Adjust values upward



 button:

- Input confirmation during cleaning program
- Select menu one level lower on the programming level
 - Move downward in the sub-menus
 - Adjust values downward



 button:

- Entry into the sub-menu
- Confirm questions on the display

4.6.3 Entry into programming level 2

You can enter programming level 2 as follows:

1. Check to see if the coffee machine is ready for operation (cf. 4.4.2, "Making the coffee machine ready for operation" page 4-4).
2. Turn the key on the programming key switch from position E1 to position TS (cf. Fig. 4.6 A). The edge of the programming key switch blinks red. The key can be removed into this position.

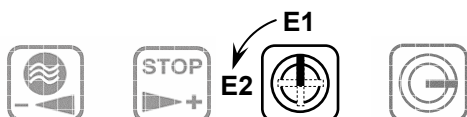


Fig. 4.6 A The key is in position E2.

4.6.4 Exiting programming level 2

You exit programming level 2 as follows:

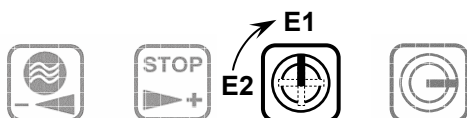
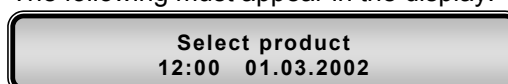


Fig. 4.6 B The key is in position E1.

1. Turn the key on the programming key switch from position E2 to position E1 (cf. Fig. 4.6 B). The edge of the programming key switch no longer blinks. The following must appear in the display:



Display example

4.6.5 Display product deliveries

DISPLAY PRODUCT DELIVERIES menu:

- Display product total
- Display delivery quantity per product

4.6.5.1 Display product total

You can display the total of the beverages delivered per product button. If several buttons of the same type have been selected simultaneously, e.g. espresso, double espresso and coffee, they are automatically displayed as the total (product total).



1. Einstieg in die Programmier Ebene 2 (cf. 4.6.3, "Entry into programming level 2", page 4-13).

2. Press [STOP] or [C+] until the following menu is displayed:

DISPLAY PRODUCT SUPPLIES
Execute ? YES='C' '-'/'+' -->

3. Press [C+].
The following message is displayed:

Total products
Display ? YES='C' '+' -->

4. Press [C+].
The total of all delivered portions of hot water appears on the display:

Total supply : 300 Tea
Gon on with "+"-Button

Display example: A total of 300 portions of hot water (tea, punch etc.) were delivered.

5. Press [STOP]. The total of all delivered coffee products appears on the display:

Total supply : 640 coffees
Reset counter ? YES='C' '+' -->

Display example: A total of 640 coffee products (espresso, coffee etc.) were delivered.

6. * If you want to delete the counter levels, press [C+].
7. * If you do not want to delete the counter levels, press [STOP].
The following message is displayed:

Supplies per product
Display ? YES='C' '-'/'+' -->

8. * If you want to display the deliveries per product, continue with step 4. on page 4-15.

9. * **Select next menu:** First press [STOP] to exit the menu. Then move through the options using [STOP] or [C+] until the desired menu appears in the display.

- 10.* **Return to normal operation mode:** on page 4.6.4.
"Exiting programming level 2" on page 4-13.
The following must appear in the display:

Select product
12:00 01.03.2002

Display example

4.6.5.2 Display delivery quantity per product

You can display the total of the beverages delivered per product button.



1. Einstieg in die Programmier Ebene 2 (cf. [4.6.3, "Entry into programming level 2"](#), page [4-13](#)).

2. Press [STOP] or [Circular Arrow] until the following menu is displayed:

DISPLAY PRODUCT SUPPLIES
Execute ? YES='C' '-/+' -->

3. Press [Up Arrow].
The following message is displayed:

Total products
Display ? YES='C' '+ ' -->

4. Press [STOP].
The following message is displayed:

Supplies per product
Display ? YES='C' '-/+' -->

5. Press [Up Arrow].
The following message is displayed:

Select product '+ ' -->

6. Press the desired product button.
The product button is illuminated with a green light.
The following message is displayed:

Select product '+ ' -->
Total supply : 156 Stück

Display example: 156 products were delivered with this button.

7. Press the same button again in order to retrieve the next product,
The following message is displayed:

Select product '+ ' -->

8. * If you want to retrieve the delivery quantities from the other product buttons, repeat steps 6. and 7.

9. * **Select next menu:** Press [STOP] to exit the menu. Move through the options using [STOP] or [Circular Arrow] in the menu view until the desired menu appears in the display.

- 10.* **Return to normal operation:** Cf. [4.6.4, "Exiting programming level 2"](#) on page [4-13](#)

The following must appear in the display:

Select product
12:00 01.03.200

Display example

4.6.6 Change water dosage

CHANGE DOSAGE menu

The hot water quantity can be set for each product and hot water product individually.



Note:

If the hot water dosage in a product is changed, this amount is the new dosage of the water quantity. The current water quantity of a product cannot be supplemented with another water sub-quantity!



1. Einstieg in die Programmierenebene 2 (cf. 4.6.3, "Entry into programming level 2", page 4-13).



2. Press [STOP] or [C] until the following menu is displayed:



3. Press [C].
The following message is displayed:



Danger!

Ensure that the product delivery occurs directly after step 4. is executed! To protect yourself against scalding, keep hands and other body parts away from the delivery area during the preparation and delivery of beverages.

4. Position an empty cup underneath the beverage outlet or the hot water outlet. Press the desired product button.
The pressed button illuminates and the product is delivered.
The following message is displayed:



Note:

If you have accidentally pressed the wrong product button, you can undo the action, by turning the key on the programming key switch back to position E1. Then continues with Step 1.



5. Press [STOP] is the filling quantity in the cup is as you would like.
The product button is no longer illuminated.
The following message is displayed:



6. * If the new dosage of a product just changed is not as you would like it, continue with step 4.
7. * If you want to correct the water dosage for other products, continue with step 4.
8. * **Select next menu:** First press [STOP] to exit the menu. Move through the options using [STOP] or [E1] in the menu view until the desired menu appears in the display.



9. * **Return to normal operation:** Cf. 4.6.4, "Exiting programming level 2" on page 4-13
The following must appear in the display:

Select product
 12:00 01.03.2002

4.6.7 Change grinding quantity.

CHANGE GRINDING QUANTITY menu:

- Change the grinding quantity for all products
- Change the grinding quantity per product
- Change the grinding mixture distribution (optional feature: two coffee grinders and more)

Dosage range: 0 – 1500 steps

The grinding quantity is set at intervals of 1/100 second grinding time for the coffee grinder.

Tip: In order to achieve a perceivable difference in taste, adjust the grinding quantity in intervals of 10!

4.6.7.1 Change the grinding quantity for all products

In this function you can change the ground coffee quantity with a similar quantity of ground coffee for all coffee products.
















1. Entry into programming level 2 (cf. 4.6.3, "Entry into programming level 2", Page 4-13).
2. Press [STOP] or [E1] until the following menu is displayed:

CHANGE GRIND QUANTITY
 Execute ? YES='C' '-/+' -->










3. Press [C↑].
The following message is displayed:

Grinding time all products
 Modify ? YES='C' '+ ' -->




-  4. Press .
The following message is displayed:
- Adjust grinding time all products**
 Change 0 Steps '-/+' 'C' -->
-   5. Press  or  to increase or reduce the grinding quantity.
- Adjust grinding time all products**
 Change 20 Steps '-/+' 'C' -->
- Display example: The current grinding quantity of all coffee products was increased by 20 intervals.
-  6. * Press  to exit the sub-menu.
The following message is displayed:
- Grinding time each product**
 Modify ? YES='C' '+' -->
7. * If you would now like to change the grinding quantity of individual products, continue with step 4. in the sub-menu ["Change the grinding quantity per product"](#), Page 4-18.
-  8. * **Select next menu:** First press  twice to exit the menu. Then move through the options using  or  in the menu view until the desired menu appears in the display.
-  9. * **Return to normal operation mode:** [Exiting programming level 2"](#) on page 4-13.
The following must appear in the display:
- Select product**
 12:00 01.03.2002

4.6.7.2 Change the grinding quantity per product

-  1. Entry into programming level 2 (cf. [4.6.3, "Entry into programming level 2"](#), page 4-13).
-   2. Press  or  until the following menu is displayed:
- CHANGE GRIND QUANTITY**
 Execute ? YES='C' '-/+' -->
-  3. Press .
The following message is displayed:
- Grinding time all products**
 Modify ? YES='C' '+' -->
-  4. Press .
The following message is displayed:
- Grinding time each product**
 Modify ? YES='C' '+' -->





5. Press [].
The following message is displayed:



Modify grind quantity per product
Select product '+' -->

6. Press the desired product button.
The button pressed is illuminated with a green light.
The following message is displayed:

Modify grind quantity per product 5
120 Steps '-' Less '+' More

Display example:
The fifth button from the left is pressed. The display shows the current ground coffee quantity at 120 intervals.



7. Enter the desired grinding mixture using [] or [].
The following message is displayed:

Modify grind quantity per product 5
130 Steps '-' Less '+' More




Display example:
The ground coffee quantity of product 5 was increased by 10 intervals and now has a ground coffee quantity of 130 intervals.

8. Press the illuminated product button again to confirm the value just entered.
The following message is displayed:

Modify grind quantity per product
Select product '+' -->

9. * If you want to change the grinding quantity for other coffee products, continue with step 6.



- 10.* **Select next menu:** First press [] twice to exit the menu. Then move through the options using [] or [] in the menu view until the desired menu appears in the display.



- 11.* **Return to normal operation mode:** Cf. 4.6.4, "Exiting programming level 2" on page 4-13.
The following must appear in the display:

Select product
12:00 01.03.2002

4.6.7.3 Change the grinding mixture distribution (optional feature)



Note:

This menu only functions if your coffee machine is equipped with two or more coffee grinders.

Cf. 7.11.1.1 Grinding mixture adjustment for coffee machines on page 7-7 and 7.11.1.2 Grinding mixture adjustment for coffee machines with 2 to 4 coffee grinders) on pages 7-9.

4.6.8 Change time/date

Change **TIME AND DATE DISPLAY** menu



Note:

You can skip a group of numbers (e.g. hours, day display) by pressing [**Ct**].

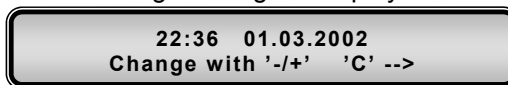


1. Entry into programming level 2 (cf. 4.6.3, "Entry into programming level 2", page 4-13).

2. Press [**STOP**] or [**Menu**] until the following menu is displayed:



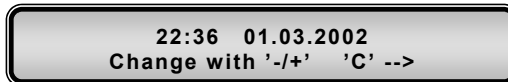
3. Press [**Ct**].
The following message is displayed:



Display example: The cursor is under the second digit of the hour display.

4. Enter the hours using [**STOP**] or [**Menu**].

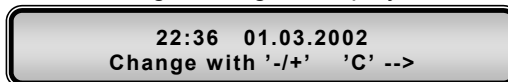
5. Press [**Ct**] to confirm your entry.
The following message is displayed:



Display example: The cursor is under the second digit of the minute display.

6. Enter the minutes using [**STOP**] or [**Menu**].

7. Press [**Ct**] to confirm your entry.
The following message is displayed:



Display example: The cursor is under the second digit of the day display.

8. Enter the day using [**STOP**] or [**Menu**].

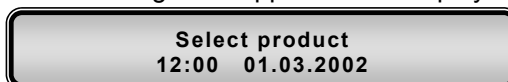
9. Press [**Ct**] to confirm your entry.

10. Repeat steps 8 and 9 to set the month and the year.

- 11.* **Select next menu:** First press [**Ct**] to exit the menu. Then move through the options using [**STOP**] or [**Menu**] in the menu view until the desired menu appears in the display.

- 12.* **Return to normal operation mode:** Cf. 4.6.4, "Exiting programming level 2" on page 4-13.

The following must appear in the display:



Display example

4.7 Disable/enable product buttons

In position TS of the programming key switch buttons with the products saved in level 1 and/or level 2 can be disabled or enabled.



Note:

- To disable a button, either level 1 or level 2 of the particular button must contain a product.
- Several buttons can be disabled or enabled using the same procedure.
- With buttons having products saved in level 1 and 2 it is also possible to just disable or enable one of the products.
- When a product button is enabled or disabled, it is possible to undo the action by pressing the same button again.

4.7.1 Disable product buttons

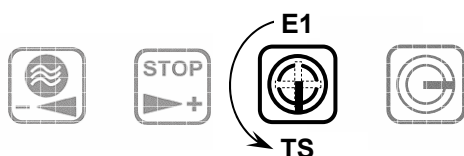


Fig. 4.7 A

The key is in position TS.

1. Turn the key on the programming key switch from position E1 to position TS (cf. Fig. 4.7 A). The programming key switch blinks red. The buttons containing products are illuminated with a green light. The following message is displayed:

Lock / release button
Press required button

2. * If you do not press any button for 5 seconds, the following appears on the display:

Lock / release button
Timeout 5 Sec.

3. * Turn the key on the programming key switch in another switch position (the direction turned is unimportant) and then back to position TS. The following must appear in the display:

Lock / release button
Press required button

4. The product key(s) can be disabled as follows:
Level 1: Pres the desired product button(s).
Level 2: First press [] and then the desired product button(s).

[]



Note:

A pressed product button is no longer illuminated only if the product contained in level 2 has also been disabled.

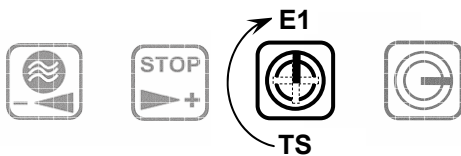


Fig. 4.7 B The key is in position E1.

5. When you have finished making the entry, turn the key back to position E1 (cf. Fig. 4.7 B). The following must appear in the display:

Select product
 12:00 01.03.2002

Display example

4.7.2 Enable product buttons

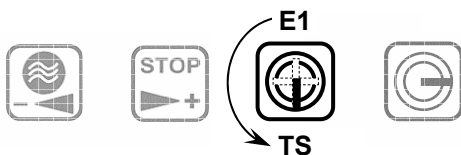


Fig. 4.7 C The key is in position TS.

1. Turn the key on the programming key switch from position E1 to position TS (cf. Fig. 4.7 C). All of the product keys which do not illuminate in green are disabled: The programming key switch blinks red. The following message is displayed:

Lock / release button
Press required button

2. * If you do not press any button for 5 seconds, the following appears on the display:

Lock / release button
Timeout 5 Sec.

3. * Turn the key on the programming key switch in another switch position (the direction turned is unimportant) and then back to position TS. The following must appear in the display:

Lock / release button
Press required button

4. The product key(s) can be enabled as follows:
 Level 1: Pres the desired product button(s).
 Level 2: First press [C↑] and then the desired product button(s).

[C↑]

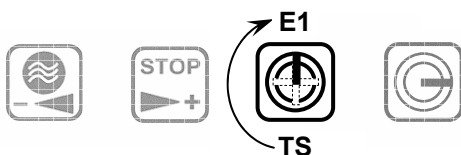


Fig 4.7 D The key is in Position E1.

5. When you have finished making the entry, turn the key back to position E1 (cf. Fig. 4.7 D). The following must appear in the display:

Select product
 12:00 01.03.2002

Display example

5. Contents

Chapter	Text	Page
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5.2	Daily cleaning.....	5-3
5.2.1	Inside Cleaning	5-4
5.2.2	Outside cleaning	5-8

5 CLEANING

5.1 *Important general notes on cleaning*



Danger!

Never reach into the machine during automatic cleaning and keep clear of the beverage outlets.



Danger!

Never clean the machine with a hose or a high pressure cleaner. Do not use steam cleaning devices.

Never immerse the machine in water!



Important!

- Always follow hygiene regulations according to **HACCP!**
- Wash and disinfect your hands thoroughly before cleaning the machine!
- If you operate the coffee machine together with a milk unit, read the chapter "Cleaning" in the user manual.
Only use cold clean water for automatic cleaning, and comply with the dosing instructions, safety regulations and warnings printed on the packaging of the cleaning product!
- Never use abrasives, scrubbers or cleaning tools made of metal!
- Only use cleaning agents approved by the manufacturer.
- Carefully read the chapter regarding the cleaning agents in [8.2.1 "Cleaning powder for the coffee machine"](#) on page 8-3. Carefully read the safety data sheet, if included.
- Ask the manufacturer or a customer service, authorized by the manufacturer, for advice on the cleaning tools you should use.
- Please note that some components in the following illustrations may differ from those in your machine.
- All the machine's product outlets will be disabled during the cleaning cycle.
- The machine cleaning program consists of an automatic self-cleaning cycle and a manual cleaning cycle. Together they form one operation cycle.
- To ensure that all products are available in best quality, careful daily and weekly cleaning is imperative.

Daily cleaning

5.2 Daily cleaning

The machine cleaning program consists of an automatic cleaning cycle and a manual one. Together they form one operation cycle.

The cleaning program should be operated daily.

Upon request, the service technician can program the time for daily cleaning depending on the specific quantity of the coffee beverages to be dispensed. When this quantity has been reached, the following appears on the display



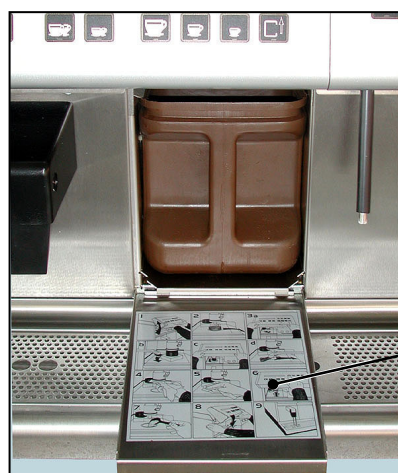
Important!

The automatic cleaning process starts again from the beginning if the coffee machine is switched off and then on again with the stand-by/on key switch or after a power outage.



Note:

A short cleaning instruction (cf. [Fig 5.2 A](#)) is to be found on the inside of the front door of the coffee grounds container.



1. Open the front door of the coffee grounds container door downward.

1

Hot water tap

- 1 Short cleaning instruction

Fig. 5.2 A

Daily cleaning

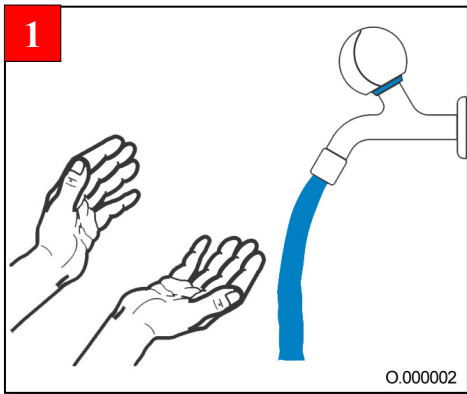
5.2.1 Inside Cleaning



Important!

Never use scouring tools, pads or abrasive agents, chemicals or cleaning tools made of metal.

These devices could damage the smooth surfaces and leave behind traces in which harmful germs are more likely to develop.



1. Wash and disinfect your hands thoroughly. Protect open wounds. You may use protective gloves.



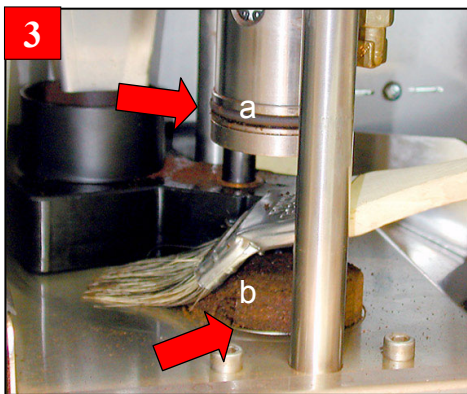
Danger!

The following steps also discuss cleaning the brewing unit which may still be hot. Protect your hands and arms before you begin cleaning!



2. Lift up the panel until it is fixed into place. The following message is displayed:

Cleaning-program
selection locked



3. Remove all ground coffee residue from the side panels, the upper (a) and lower (b) brewing pistons and the brewing plate by using the supplied brush.



Danger!

In the next step, the swivel arm will move forward. Therefore never reach inside the machine and only operate the two outside buttons! Also ensure that no one is working in the danger zone.



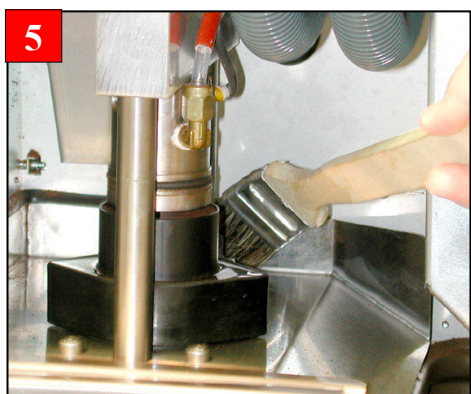
Daily cleaning



4. Press both outside buttons on the panel simultaneously with both hands.

The swivel arm moves forward
The display shows:

Cleaning-program
selection locked



5. Remove the coffee ground residue on the back of the brewing plate with the brush.



Danger!

In the next step, the swivel arm will move back. Therefore never reach inside the machine and only operate the two outside buttons! Also ensure that no one is working in the danger zone.



6. Press both outside buttons on the panel simultaneously with both hands.

The swivel arm moves back.
The display shows:

Cleaning-program
selection locked



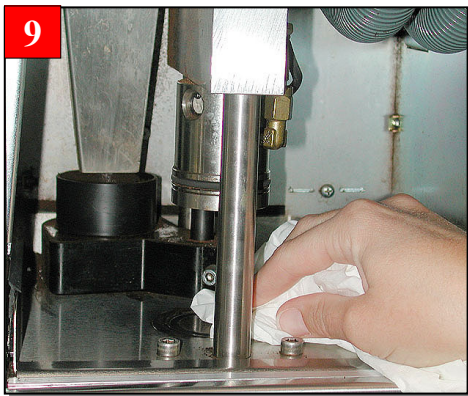
7. Remove the coffee ground residue on the front of the brewing plate with the brush.



Daily cleaning





8. Clean the upper piston with a moist and clean paper tissue.



9. Clean the lower pistons, the brewing plate and the side panels with clean and moist paper towels



10. Press [].
The button [] blinks.
The piston in the brewing cylinder moves downward
The display shows:

Cleaning-program
selection locked

11. Before continuing the procedure, read the following instructions carefully.

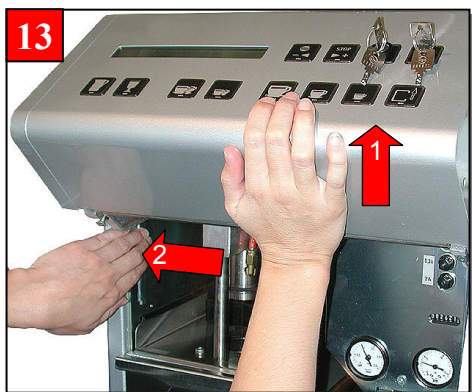
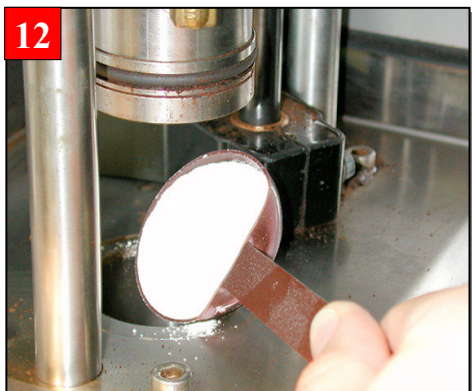


Danger!

It is crucial that you read the dosing and safety instructions on the cleaning agent container label. Read chapter 8.2.1, "Cleaning powder for the coffee machine," on page 8-3.



Daily cleaning

**Danger!**

Never mix the cleaning powder with liquid cleaning agents, powder-form cleaning agents or acids!


12. Pour one measuring spoon (supplied) cleaning powder into the brewing cylinder.

**Danger!**

In the next step the machine will automatically start the self-cleaning cycle. Do not touch the beverage outlet and do not open the panel during automatic cleaning under any circumstances!

13. Close the panel by lifting it up a little and then holding it in this position. With your free hand, press on the lock and move it as far to the left as possible until the panel can be opened downward.

The cleaning program starts immediately after the panel is closed.

The button [] is now constantly illuminated. The display shows:

Cleaning-program
selection locked

The coffee system is now automatically cleaned and rinsed.

The self-cleaning cycle lasts approx. 7 minutes.

When the cleaning program has finished, the following appears in the display:

select product
12:00 01.03.2002

Display example



Daily cleaning

5.2.2 Outside cleaning

14. Do not clean the outside until the rinsing cycle has finished.



Important!

Never clean the outside during the cleaning cycle!



Important!

Never use scouring tools, pads or abrasive agents, chemicals or cleaning tools made of metal.

These devices could damage the smooth surfaces and leave behind traces in which harmful germs are more likely to develop.



15. Remove the coffee grounds container. The following message is displayed:

selection locked
** container n.i. place**

16. Clean the coffee grounds container with a dish detergent. Then rinse the inside and outside with warm, flowing water.
17. Remove the ground coffee residue from the coffee grounds compartment with the brush (supplied).
18. Clean the coffee ground container compartment and the door with a clean and moist paper tissue. Then dry the surfaces with a clean and dry paper tissue.



Daily cleaning



19. Lift up the two drip grids from the drip tray.
20. Clean the drip grids and the external surfaces of the coffee machine with dish detergent.
21. Rinse the drip grids under clean, warm running water.

22. Rinse the drip tray with warm water.
23. Wipe the cleaned surfaces with a moist paper tissue.

24. Dry the external surfaces with a clean paper tissue.
25. Put the drip grids back in the drip tray.
26. Push the coffee grounds container back into the coffee grounds container compartment and then close the front door of the coffee grounds container compartment.

The coffee machine is ready to dispense products when the following

select product
12:00 01.03.2002

appears on the display.

Display example

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6 ERROR MESSAGES AND MALFUNCTIONS

6.1 Error messages with display

6.1.1 Error messages - coffee machine





Danger!

Inform your authorised customer service representative immediately if you cannot rectify a malfunction!

Do not attempt to repair the coffee machine yourself!

Display message	Cause	Rectification
"Button ?" <small>(sTxt-008)</small>	The product button just pressed (blinks) and will not return to the initial position. <i>The coffee machine is blocked.</i>	<ul style="list-style-type: none"> - Try to un-jam the product button by pressing it several times - If the failure persists, contact a manufacturer-authorised customer service representative.
"Container full" <small>(sTxt-019)</small>	You can still serve 10 products before the coffee machine gets blocked.	Empty the coffee grounds container.
"E-EPROM writing error" <small>(s. Txt 220)</small>	The serial E-EPROM is defective. <i>The coffee machine is blocked.</i>	Contact a manufacturer-authorized customer service representative.
"Empty container" <small>(sTxt-007)</small>	The coffee grounds container is full. <i>The coffee machine is blocked.</i>	Empty the coffee grounds container.
"Heating steam" <small>(sTxt-108)</small>	<ul style="list-style-type: none"> - Excessive steam outputs. - Phase fuse defective. Do not produce any steam during the heat-up phase.	<ul style="list-style-type: none"> - Wait for approx. 5 minutes. If during this time "Timeout heater steam" appears on the display, check if phase fuse is defective. - If the message persists, contact a manufacturer-authorised customer service representative.
"Heating up" <small>(sTxt-002)</small>	Coffee machine was unplugged from power supply. The boilers are heated up. <i>Do not serve any products during the heat-up phase.</i>	Wait until "Select product" or "Credit operation" appears on the display.
"Machine cleaning required!" <small>(s. Txt 142)</small>	Only for coffee machines without a fixed drinking water connection. <i>The coffee machine is blocked.</i>	Fill up the fresh water container with drinking water and then press [].
"Machine cleaning required" <small>(s. Txt 018)</small>	The pre-set product quantity activated this message. Note: Cleaning is not required. <i>Products can still be served.</i>	The display message only disappears when you have cleaned the coffee machine. Clean the machine as described in 5 "Cleaning" , page 5-2.
"Product Data Error" <small>(fix-001)</small>	When illuminated green, the product button indicates a programming error. If the [C] button turns green, the product indicates a programming error on level 2. <i>Products can still be served.</i>	<ul style="list-style-type: none"> - Press []. - If the display message comes back on after the coffee machine is switched on (Standby → On), contact a manufacturer-authorised customer service representative.

Display message	Cause	Rectification
"Renew batterie" (sTxt-144)	The support battery for the RAM memory of the internal control board is defective. <i>Products can still be served.</i>	Contact a manufacturer-authorized customer service representative.
"Replace waterfilter" (sTxt-113)	The programmed water quantity has flowed through the filter. <i>Products can still be served.</i>	<ul style="list-style-type: none"> - The water filter must be replaced. - If you do not have a replacement water filter, contact a manufacturer-authorized customer service representative.
"Selection locked" (sTxt-128)	The selected product is disabled. <i>Only this product is disabled.</i>	Turn the key on the key-controlled programming switch to the TS position and you can enable the product. S. 4.7 "Enable / disable product buttons", page 4-21.
"Service wanted" (sTxt-178)	The programmed number of beverages has been served or the programmed time limit for the next service has been reached. <i>Products can still be served.</i>	Contact a manufacturer-authorized customer service representative.
"System-Data Error" (fix-002)	An error has occurred in the general system data. <i>The coffee machine is possibly blocked.</i>	<ul style="list-style-type: none"> - Press []. - If the display message comes back on after the coffee machine is switched on (Standby → On), contact a manufacturer-authorized customer service representative.
"Temperatur sensor defektive" (sTxt-204)	<ul style="list-style-type: none"> - Break in connection between coffee machine and external payment unit. - The external payment unit is not ready for operation. <i>The coffee machine is blocked.</i>	<ul style="list-style-type: none"> - Check whether the external payment unit is correctly connected. - Remedy: Operate the coffee machine in normal operation by moving the key on the program key-operated switch from position A to position E1. - Contact a manufacturer-authorized customer service representative.
"Temperatur sensor defektive" (sTxt-145)	<ul style="list-style-type: none"> - Short circuit of temperature sensor. - Cable interruption. <i>The coffee machine is blocked.</i>	Contact a manufacturer-authorized customer service representative.
"Timeout heater steam" (sTxt-175)	<ul style="list-style-type: none"> - The coffee grounds container is not in its compartment. - The coffee grounds container is not in its proper final position. - Limit switch is damaged. <i>The coffee machine is blocked.</i>	<ul style="list-style-type: none"> - Push coffee grounds container fully into coffee grounds container compartment. - Check whether the coffee grounds container is fully inserted into the coffee grounds container compartment. If necessary, remove the coffee grounds residue from the back panel and base plate of the coffee grounds container compartment. - If the message persists, contact a manufacturer-authorized customer service representative.
"Timeout internal communication" (sTxt-104)	<ul style="list-style-type: none"> - The stop valve of the fresh water feed is closed. - The coffee machine pipe system is furred up. <i>Products can only be served with errors.</i>	<ul style="list-style-type: none"> - Open the stop valve. - If the message persists, contact a manufacturer-authorized customer service representative.

Display message	Cause	Rectification
"Timeout internal communication" (sTxt-187)	Communication with an external device (e.g. cold milk solution unit) has been interrupted. The coffee machine is blocked.	<ul style="list-style-type: none"> - Check if the external unit is correctly connected and ready for operation. - If the message persists, contact a manufacturer-authorized customer service representative.
"Waste watertank full !" (sTxt-143)	The floating switch has communicated this. This message only applies to coffee machines without a fixed wastewater outlet The coffee machine cannot be operated.	Empty the wastewater container and then press [].

6.2 Malfunctions without display messages



Note:

The following problems may occur without causing the coffee machine to display an error message.

Malfunction	Cause	Rectification
Dark display, no message (Ref.Nr.01)	The coffee machine is disconnected or the main switch is OFF.	Connect the coffee machine with the power supply or switch the main switch to ON.
No coffee but normal operational noises can be heard (Ref.Nr.04)	Hydraulic system is defective.	Contact a manufacturer-authorized customer service representative.
No steam (Ref.Nr.03)	<ul style="list-style-type: none"> - The holes of the steam nozzle are stopped up. - The dry safety switch has communicated this. 	<ul style="list-style-type: none"> - Clean the holes with a fine, solid object. - Contact a manufacturer-authorized customer service representative.
Water escapes from the steam tap (Ref.Nr.05)	Feed valve or regulator is defective.	Contact a manufacturer-authorized customer service representative.
Watery coffee (Ref.Nr.06)	<ul style="list-style-type: none"> - The bean container hatch is closed. - The coffee grinder does not grind. - Phase fuse defective. 	<ul style="list-style-type: none"> - Pull out the bean container hatch (below on the coffee bean container). - Check if the mill is blocked. - If yes, disconnect the coffee machine from the power supply. Close the lower opening on the coffee bean container with the sliding hatch. Then remove the coffee bean container from the coffee machine. Vacuum the coffee beans out from the mill. Check the grinder for stuck objects. - If the problem persists, check if the phase fuses are defective. - If the problem still persists, contact an authorised customer service representative.

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7 OPTIONAL FEATURES

7.1 *Payment systems*

Your coffee machine can be connected to your cash register by means of a payment system, for example. This facilitates daily, weekly and monthly accounting. Your coffee machine has been prepared for connection to a payment system and it is compatible with all conventional systems on the market.

With a computing system that has been installed and is active, you can select or display the following settings:

- Switch between day/night price
- Display sales total
- Print waiter total
- Display price total per product
- Disable/enable waiter jack
- Change product prices



Note:

For additional information, contact a manufacturer-authorised customer service representative

7.2 *Water softener (Filados/Brita)*

A water softener helps to reach a better water quality and softens it. It allows the recommended value for the coffee machine to be achieved.



Note:

For additional information, contact a manufacturer-authorised customer service representative.

7.3 *Cup warmer*



The cup warmer consists of an additional framing. Cups can be pre-heated in large quantities.



Note:

For additional information, contact a manufacturer-authorised customer service representative.

7.4 User instructions for special machines (water tank)

This chapter discusses coffee machines which are equipped with a fresh and wastewater container.

7.4.1 Refill fresh water tank

When the level in fresh water tank becomes too low, the [STOP] key flashes. The following message is displayed:

Select product
Watertank empty

Perform the following procedure:

1. Take out the fresh water tank.
2. Fill the fresh water tank with clean drinking water.
3. Place the fresh water tank back into the space provided.
4. Press [STOP] to exit the message on the display.



Note:

- To prevent the water pump from functioning without water, no products can be selected if the water level is too low. The product currently selected will still be dispensed.
- Always check the water level before running the cleaning program.

7.4.2 Empty wastewater tank

The [STOP] key flashes when the wastewater tank is full. The following message is displayed:

Select product
Waste watertank full

Perform the following procedure:

1. Remove the wastewater tank.
2. Empty the wastewater tank and rinse it, if necessary.
3. Place the wastewater tank back into the space provided.
4. Press [STOP] to acknowledge the message on the display.



Note:

- To prevent the wastewater tank from overflowing, no products can be selected. If the message is displayed while a product is being dispensed, service continues.
- Always empty the wastewater container before running the cleaning program.

7.4.3 User instructions for machines with fresh and wastewater tanks (trolley-mounted)

Capacities are as follows:

- Fresh water tank: 16 liters.
- Wastewater tank: 11 liters
- The fresh water tank must be filled daily with fresh, clean drinking water.
- If the machine is out of use for lengthy periods, both tanks must be emptied and cleaned.
- Always keep the inside of the trolley dry.
- Only place the tanks in the space provided (level monitoring).



Danger!

- For safety reasons, the trolley must be pulled, not pushed, during transport.
- The trolley is not intended for the transport of goods. The manufacturer accepts no liability for damage caused by misuse of the trolley or failure to follow the user instructions.

7.5 Swan neck



The outlet height can be adjusted to include a second coffee outlet, called a swan neck, for individual coffee containers (e.g. cups, thermoses, pots)

Legend:

- 1 Swan neck
- 2 Normal coffee outlet



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.6 *Coffee powder doser*

A dosage device for ground coffee eliminates the need to manually fill a brand of coffee into the funnel on the coffee machine. Serving is just as easy as with coffee beverages made from freshly ground coffee beans.

7.7 *Coffee grounds disposal to container*

If a large amount of coffee is served or if the coffee machine is used in a self-service establishment, we recommend adding a coffee grounds container.

The coffee grounds container is kept under the counter (cf. ["Machine configuration for mobile operation"](#), page 3-3 and the figure in sub-chapter 7.11.8 on page 7-13).

7.8 *MiniMix Light Unit*

The MiniMix Light Machine can help to fulfil customer requests.

Customers can select settings using a customer card (chip card) based on their own taste, including coffee and water quantity and the coffee mixture.

The chip card is also suitable for a cashless payment system.



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.9 *Automatic and manual steam output*

The steam outlet can be set as dosed (automatic) or undosed (manual) depending on the operating requirements.

When the steam outlet is dosed, the service time is adjusted to the specific type of cup and a specific beverage temperature. The steam outlet is automatically shut off when the beverage reaches the programmed temperature.

In the undosed steam outlet (start/stop mode) the outlet time can be set for the type of cup and the individual temperature of the beverage to be heated.

7.9.1 *Temperature sensor on the steam outlet*

The temperature sensor connected to the steam pipe constantly measures the temperature of the beverage while it is being heated. The steam outlet is automatically shut off when the beverage reaches the programmed temperature.

Steam emission is also possible in start/stop mode.

7.9.2 Release steam with the steam button

Press the **[Steam]** button to release steam. Steam is delivered according to whether the **dosed** or **undosed** program was selected.

Perform the following procedure:

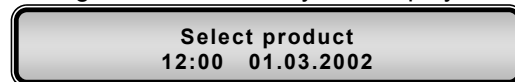


Danger!

Keep away from underneath the steam pipe while steam is delivered! Hold the cup in such a way that no liquid is spilled onto your hands or other body parts during heating!

1. Point the steam pipe towards the drip grid. Press the **[Steam]** button to remove the condensation from the pipe system. Press the **[Steam]** button again as soon as only steam is delivered through the steam pipe (only possible with undosed delivery).
2. Immerse the steam pipe into the cup with the beverage to be heated until it reaches the bottom.
3. Press the **[Steam]** button.
Steam is let out.

During the steam delivery, the display does not change:



Danger!

The beverage may start to bubble when the boiling point is reached.

Ensure that the steam pipe is always immersed in the liquid during steam delivery.

4. Heat the content to the desired temperature. To do this, move the container slowly up and down. Ensure that the steam pipe is always immersed in the liquid.
Tip: The deeper the sound, the higher the temperature of the heated liquid.
5. * Stop or interrupt steam delivery (only possible with dosed delivery):
Press the **[Steam]** button.

If dosed delivery has been programmed in, the steam delivery is automatically discontinued after the specified dosage time ends.

6. Put the cup aside.



Danger!

The steam pipe is hot. Touch the steam pipe only by using the insulated handle.

7. Clean the outside of the steam pipe with a wet and clean paper tissue.
8. * If a non-dosed delivery is programmed: Point the steam pipe towards the drip grid. Press the **[]** button twice in short sequence to clean the inside of the steam pipe.

7.10 Coffee output accelerator

There are two functionally different coffee production accelerators in the product line:

- Turbo program for self service
- Brew accelerator based on the bypass principle, for self-service and normal operation.



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.11 Variations

The Schaerer-Matic line of products allows you to tailor your hot beverage selection to specific needs.

7.11.1 Coffee grinders (two, three or four grinders)



Depending on the needs of your customers, you can equip your coffee machine with two, three or four coffee grinders. Even two coffee grinders give you a high level of flexibility when serving coffee.



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.11.1.1 Grinding mixture setting for coffee machines with 2 coffee grinders

Setting range: 5 – 95 %

The coffee mixture is set by steps of 1 %.

The [STOP] button is used to increase the grinding quantity of the coffee grinder in question while the [] button reduces it.



Note:

- The grinding quantity of coffee grinder 1 and 2 always adds up to 100%. A coffee grinder can not be taken out of operation by entering a grinding quantity of 0%.
- If the grinding quantity is increased in a coffee grinder, the grinding quantity in the second coffee grinder is reduced by the same percentage automatically.
Example: The grinding quantity of coffee grinder 1 is increased from 50% to 60%. The grinding quantity of coffee grinder 2 is automatically decreased from 50% to 40%. (60 % + 40 % = 100 %).
- The ground coffee quantity of the grinding mixture can never be greater than the ground coffee quantity which has been pre-programmed by the service technician for the coffee product in question.
- The grinding mixture can be set individually for each coffee product.

You can set the grinding quantity of coffee grinder 1 and 2 as follows:



1. Entry into programming level 2 (cf. 4.6.3, [Entry into programming level 2](#)", page 4-13).

2. Press [STOP] or [] until the following menu is displayed:

CHANGE GRIND QUANTITY
Execute ? YES='C' '-/+' -->



3. Press [C].
The following message is displayed:

Grinding time all products
Grinding time all products ? YES='C'



4. Press [STOP].
The following message is displayed:

Grinding time each product
Grinding time all products ? YES='C'



5. Press [STOP].
The following message is displayed:

Grinder balance
Grinding time all products ? YES='C'



6. Press [C].
The following message is displayed:

Change grinder balance
Select product '+' -->



7. Press the desired product button.
The button pressed lights up.
The following message is displayed:

Change Grinder balance for product 5
Grinder-1 : 50% Grinder-2 : 50%

Display example:
The fifth button from the left is pressed.
The grinding quantity for grinder 1 and 2 is 50%.



8. Select the desired grinding mixture using [grinder icon] or [STOP]. Finally press [C↑].
The product button is no longer illuminated.
The following message is displayed:

Change grinder balance
Select product '+' -->

9. * If the grinding mixture is not what you would like or if you would like to change the grinding mixture for other coffee products, continue with step 7.



- 10.* **Select next menu:** First press [STOP], to exit the menu. Move through the options using [right arrow] or [left arrow] in the menu view until the desired menu appears in the display.



- 11.* **Return to normal operation mode:** Cf. 4.6.4, "Exiting programming level 2" on page 4-13.
The following must appear in the display:

select product
12:00 01.03.2002

Display example

7.11.1.2 Grinding mixture setting for coffee machines with 2 to 4 coffee grinders

Setting range: 0 – 100 %

The grinding mixture is set in steps of 1 %.

The [STOP] is used to increase the grinding quantity of the coffee grinder in question while the [grinder icon] button reduces it.



Note:

- Regardless of the number of installed coffee grinders, the display always shows the possible settings for 4 coffee grinders.
- The sum of grinding quantities preset for the coffee grinders may not surpass 100%. A grinding quantity of 100 % corresponds to the ground coffee quantity set by the service technician for the particular coffee product.
- If a total of 100% was not set in the previous coffee grinders, the last coffee grinder adjusts the percentage.
- The grinding mixture can be set individually for each coffee product.

You can set the grinding quantities as follows:

1. Entry into programming level 2 (cf. 4.6.3, "Entry into programming level 2", page 4-13).





2. Press [STOP] or [Ct] until the following menu is displayed:

CHANGE GRIND QUANTITY
Execute ? YES='C' '-./+' -->



3. Press [Ct].
The following message is displayed:

Grinding time all products
Grinding time all products ? YES='C'



4. Press [STOP].
The following message is displayed:

Grinding time each product
Grinding time all products ? YES='C'



5. Press [Ct].
The following message is displayed:

Modify grind quantity per product
Select product '+' -->



6. Press [STOP].
The following message is displayed:

Grinder balance
Grinding time all products ? YES='C'



7. Press [Ct].
The following message is displayed:

Change grinder balance
Select product '+' -->

8. Press the desired product button.
The button pressed lights up.
The following message is displayed:

Change Grinder balance for product 5
M1: 40% M2: 20% M3: 25% M4: 15%

Display example for a coffee machine with 4 coffee grinders:
The fifth button from the left is pressed.
The grinding quantity of G1 – G4 equals 100%.



9. Select the desired grinding quantity using [Ct] or [STOP] on the coffee grinders.
Press [Ct] to go to the next coffee grinder or you can skip over it by pressing [Ct] again.
After you have made the settings, press [Ct] until the product button is no longer illuminated and

Change grinder balance
Select product '+' -->

appears on the display.



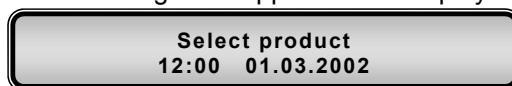
- 10.* If the grinding mixture is not what you would like or if you would like to change the grinding mixture for other coffee products, continue with [step 8](#).



- 11.* **Select next menu:** First press [STOP with right arrow], to exit the menu. Move through the options using [STOP with left arrow] or [circular button with coffee cup icon] in the menu view until the desired menu appears in the display.



- 12.* **Return to normal operation mode:** Cf. [4.6.4, "Exiting programming level 2"](#) on page [4-13](#).
The following must appear in the display:



Display example

7.11.2 Hot water and steam unit



You can also extract large quantities of hot water (up to 60 liters per hour) and steam simultaneously in combination with your coffee machine.



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.11.3 Milk unit (cold milk storage)



You can also create a variety of milk coffee drinks and trendy mixed milk beverages (cold milk output is also possible).



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.11.4 Milk foamer (hot milk storage)



You can use this machine to extract large quantities of heated milk per serving.



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.11.5 Chocolate dispenser



This machine lets you prepare chocolate drinks with hot water automatically. The chocolate powder doser is designed in such a way that even chocolate with a high sugar content can be processed. The product buttons can be programmed for the desired program type.



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.11.6 Machine configuration for high capacity performance (Model 151 SM-2)



Machine configuration from left to right:

- SM-2 with 1 ground coffee doser and coffee grinder each
- Hot water and steam unit
- SM-2 with 1 ground coffee doser and coffee grinder each



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.11.7 Machine configuration for communal service establishments



In communal service establishments, such as hospitals and assisted-living homes, there is a need for space-saving equipment which can create large quantities of good quality coffee and hot milk cost effectively.

Machine configuration from left to right:

- Milchblitz with pot sensors
- SM-2 Garni with pot sensor and double ground coffee doser for a second type of coffee



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.11.8 Machine configuration for mobile operation



Machine configuration from left to right:

- Milk unit Milchblitz
- Hot water and steam unit
- SM-2 Garni with pot sensor and double ground coffee doser for a second type of coffee and coffee grounds disposal into a container.

The coffee grounds are disposed of in the



Note:

Just ask a manufacture-authorised customer service representative for assistance.

7.11.9 Vision



As the figure shows, the coffee machine can be incorporated optimally into interior architecture décor. It is also possible to see the coffee as it is made.



Note:

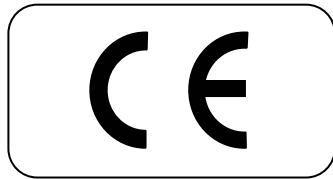
Just ask a manufacture-authorised customer service representative for assistance.

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8 APPENDIX

8.1 *CE Declaration of conformity*



These products meet the demands of the EU guidelines.

73/23/EEC Electrical Equipment for Use within Stipulated Voltage Limits.

89/336/EEC Electromagnetic Compatibility.

The declaration of conformity can be obtained from the following addresses:

M. Schaerer AG
Gewerbstrasse 15
CH - 3302 Moosseedorf / Switzerland
Phone: +41 031 858 85 111
FAX: : +41 031 858 51 40
E-Mail: info@schaerer.com
Internet: <http://www.schaerer.com>

8.2 Cleaning agent

8.2.1 Cleaning powder for coffee machine

**Important!**

Before you use the cleaning powder, read the label on the cleaning powder container and the "HEALTH AND SAFETY DATA SHEET." Should you not be in possession of the safety sheet, please order it from the distributing company.

Purpose: For the daily cleaning of the coffee machine's coffee system.

Form / smell: Cf. "HEALTH AND SAFETY DATA SHEET."

Use:

- Keep the cleaning powder out of the reach of children and unauthorized persons.
- Do not swallow!
- Do not inhale the powder dust.
- Do not eat or drink while using the cleaning powder.
- Wash hands and face immediately before breaks and after handling the cleaning powder.
- When using the cleaning powder ensure that there is sufficient ventilation.
- Never mix the cleaning powder with liquid cleaning agents, powder-form cleaning agents or acids!

Emergency information: Ask the distributing company or a customer service representative authorized by the distributor for the telephone number of the emergency information centre (toxicological information centre) in your country.
If your country has no such or similar institution, call the following number in Switzerland for information in emergencies:
++41 01 251 51 51 (Toxicological Information Centre)

First aid: Cf. "HEALTH AND SAFETY DATA SHEET."

**Note:**

Important note for physicians:
If possible show the doctor the label on the cleaning agent container or the "HEALTH & SAFETY DATA SHEET."

Storage of the cleaning powder:

- Keep out of the reach of children and unauthorized persons.
- Protect from heat, direct light and moisture
- Do not store together with acids or alkalines.
- Only store in original containers.
- Do not store together with food, beverages and other items of human consumption
- Always follow your local regulations concerning the storage of cleaning agents.

8.3 Serial plate of steam generator and instant heater

Specifications for...		8.3.1	8.3.2	8.3.3
Type		DA	DA	HW
Excess operating pressure		1,1 bar	1,1 bar	2,5 bar
Maximum excess op. pressure	pmax	1,7 bar	1,7 bar	12 bar
Test excess pressure		2,6 bar	2,6 bar	16 bar
Maximum op. temperature	Tmax	128 °C	128 °C	192 °C
Minimum op. temperature	Tmin	10 °C	10 °C	10 °C
Operating temperature		122 °C	122 °C	140 °C
Water capacity	Vol.	8,3 l	8,3 l	2,3 l
Constr. year:		20..	20..	20..
Manufacture number		DA.....	DA.....	HW.....
Capacity (Watts)	P	4500 W	6000 W	3000 W

8.3.1 Steam generator (Type SM - DA...)

Basic model: **Coffee machine 191 SM-2, 151 SM-2, 181SM-2,**

M. Schaerer AG, CH-3302 Moosseedorf					
Type	:	SM	F-Nr.	:	DA..... Constr. year: :
pmax	:	1,7 bar	Tmax	:	128 °C Vol. : 8,3 l
U	:	3x VAC	Tmin	:	10 °C P : 4500 W
f	:	50/60 Hz	Exec. and. control n. SVTI und TÜV Regulations		

8.3.2 Steam generator (Type SM - DA...)

Basic model: **Coffee machine 19 SM-2, 15 SM-2, 18 SM-2**

M. Schaerer AG, CH-3302 Moosseedorf					
Type	:	SM	F-Nr.	:	DA..... Constr. year: :
pmax	:	1,7 bar	Tmax	:	128 °C Vol. : 8,3 l
U	:	3x VAC	Tmin	:	10 °C P : 6000 W
f	:	50/60 Hz	Exec. and. control n. SVTI und TÜV Regulations		

8.3.3 Instant heater (Type - SM - HW... short)

Basic model: **Coffee machine 1 SM-2, 1 SM-2 Tea**
Coffee machine 15 SM-2, 18 SM-2, 19 SM-2
Coffee machine 151 SM-2, 181 SM-2, 191 SM-2

M. Schaerer AG, CH-3302 Moosseedorf					
Type	:	SM	F-Nr.	:	HW.... Constr. year: :
pmax	:	12 bar	Tmax	:	192 °C Vol. : 2,3 l
U	:	3x VAC	Tmin	:	10 °C P : 3000 W
f	:	50/60 Hz	Exec. and. control n. SVTI und TÜV Regulations		

8.4 *Environmental aspects*

Packaging: The machines are shipped in reusable cartons and palettes.

Spare parts: Parts exchanged during a service are reconditioned as far as possible and used again.

Coffee grounds: The coffee grounds in the grounds container can be put in the garden or added to the compost.

Cleaning agents:



Environmental protection!

If no recycling is not possible, cleaning agents and their packaging must be disposed of in line with local laws and regulations in accordance with the "HEALTH AND SAFETY DATA SHEET."

Energy consumption: The energy consumption corresponds to the technical state of the art at the time the machine was developed.

Disposal:



Environmental protection!

The machines must be disposed off correctly and in accordance with local laws and regulations.

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